

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-22, SUB 589

In the Matter of)	TESTIMONY OF
Application by Virginia Electric and)	JOHN R. HINTON
Power Company, d/b/a Dominion)	ON BEHALF OF THE
Energy North Carolina, for Approval of)	PUBLIC STAFF – NORTH
Demand-Side Management and)	CAROLINA UTILITIES
Energy Efficiency Cost Recovery Rider)	COMMISSION
under N.C. Gen. Stat. § 62-133.9 and)	
Commission Rule R8-69)	

October 26, 2020

**VIRGINIA ELECTRIC AND POWER COMPANY,
D/B/A DOMINION ENERGY. OF NORTH CAROLINA
DOCKET NO. E-22, SUB 589**

**TESTIMONY OF JOHN R. HINTON
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION**

October 26, 2020

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**
2 **PRESENT POSITION.**

3 A. My name is John R. Hinton. My business address is 430 North
4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am the
5 Director of the Economic Research Division of the Public Staff, North
6 Carolina Utilities Commission.

7 **Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.**

8 A. My qualifications and duties are included in Appendix A.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. The purpose of my testimony is to offer recommendations
11 concerning the avoided costs used by Virginia Electric and Power
12 Company (VEPCO), d/b/a Dominion Energy North Carolina (DENC
13 or the Company) to calculate the cost effectiveness scores and
14 develop its portfolio performance incentive (PPI) applied in this
15 proceeding. I will also address an issue brought up by Public Staff
16 Witness David Williamson in last year's proceeding regarding

1 DENC's avoided capacity rates to be used in the cost-effectiveness
2 analysis of the portfolio.

3 **Q. PLEASE DISCUSS THE AVOIDED COSTS USED TO DETERMINE**
4 **COST EFFECTIVENESS OF THE PORTFOLIO OF PROGRAMS IN**
5 **THIS PROCEEDING.**

6 A. The Company states that that underlying avoided cost sources for
7 the eligible programs are consistent with the most currently approved
8 cost recovery and incentive mechanism dated May 22, 2017, in
9 Docket No. E-22, Sub 464 (Mechanism). Paragraph 57 of the
10 Mechanism states that:

11 "For purposes of calculating the PPI, the per kW
12 avoided capacity costs used to calculate net savings
13 for each Program and Vintage shall be determined
14 annually by DNCP using comparable methodologies to
15 those used in the most recently approved biennial
16 avoided cost proceeding. The per kWh avoided cost
17 shall be those reflected in or underlying the most
18 recently filed integrated resource plan (IRP)."

19 Paragraphs 19 and 20 have similar language that applies to the
20 development of cost effectiveness calculations for programs that the
21 Company files for approval with the Commission. Paragraph 21 of
22 the Mechanism establishes avoided transmission and distribution
23 costs to be used. Each of these paragraphs are used as the basis

1 for determining the (1) PPI and (2) going forward cost effectiveness
2 evaluations used in Company Exhibits DRK-1 Schedules 2 and 4,
3 respectively. This makes the manner of how avoided capacity and
4 energy cost rates are calculated central to the DSM and EE portfolio.

5 Through discovery, the Company stated that it used the
6 recommended Plan B from its 2020 Integrated Resource Plan (IRP)¹
7 for the calculations of its avoided capacity and energy costs to
8 determine the cost effectiveness and PPI pursuant to paragraphs 41
9 and 57. I believe this complies with the Mechanism.

10 **Q. DOES THE PUBLIC STAFF HAVE ANY CONCERNS WITH THE**
11 **USE OF RESOURCE EXPANSION PLAN WITH PLAN B OF THE**
12 **2020 IRP?**

13 A. No. I have reviewed the avoided energy costs which are impacted by
14 the future resource expansion of Plan B and I maintain that the
15 avoided or marginal energy costs from Plan B are comparable to the
16 avoided energy costs associated with Plan A. Given the current
17 practice in North Carolina, Plan A is considered least cost without the
18 mandates identified in the Virginia Clean Economy Act of 2020
19 (VCEA). While Plan B has over 2,500 MWs of offshore wind in 2026
20 and 2027 and significant solar MW additions, it is expected that there
21 will be a relatively few number of hours that these renewable

¹ Docket No. E-100, Sub 165.

1 resources mandated by the VCEA will be on the margin to
2 significantly alter the avoided energy costs associated with these
3 programs for this proceeding.

4 **Q. DID YOU REVIEW THE AVOIDED ENERGY AND AVOIDED**
5 **CAPACITY COST RATES THAT UNDERLIE THE COST BENEFIT**
6 **TESTS USED IN THE CALCULATION OF THE PPI?**

7 A. Yes. The Company relies on the Strategist model to calculate the
8 marginal energy and marginal capacity avoided by DSM and EE
9 programs. The avoided cost rates for capacity are comparable to the
10 avoided capacity rate per KW approved in the 2018 Biennial
11 Proceeding, Docket No. E-100, Sub 158 and the avoided energy
12 rates are based on the same input data as applied in the 2020 filed
13 IRP, which is in compliance with the Mechanism.

14 **Q. PLEASE DESCRIBE THE COMPARABLE METHOD(S) USED BY**
15 **THE COMPANY TO FORMULATE THE AVOIDED ENERGY COST**
16 **RATES APPLICABLE TO THIS PROCEEDING?**

17 A. The Strategist planning model is a least cost capacity expansion
18 model that performs optimizations of alternative supply-side and
19 demand-side resources, with the added ability to calculate cost-
20 effectiveness tests for DSM and EE programs. DENC's use of
21 production cost inputs, load forecasts, and other input data used in
22 its 2020 IRP are consistent with the inputs in its Strategist model

1 used to calculate the avoided energy cost benefits that are generated
2 with respect to the specific demand side management (DSM) and
3 energy efficiency (EE) programs.

4 **Q. PLEASE DISCUSS THE ISSUE RAISED IN THE LAST DSM/EE**
5 **RIDER PROCEEDING ON THE CALCULATIONS USED TO**
6 **DETERMINE THE AVOIDED CAPACITY RATES.**

7 A. In the last proceeding, Docket No. E-22, Sub 577, Public Staff
8 witness Williamson discussed how the Company utilizes a mix of
9 generation units to determine its avoided capacity costs for use in
10 the DSM/EE proceeding. In that proceeding, witness Williamson
11 stated that:

12 “The Public Staff believes that the use of a CT is the
13 appropriate input to the methodology used to determine
14 the avoided cost rate for capacity, as compared to the
15 use of other generation units which overstate the
16 avoided capacity benefits of the programs. However,
17 the impact was not material to the calculations of the
18 cost effectiveness for the new EE programs.”

19 While I have not completed my review of the Company’s IRP, I have
20 reviewed the costs of new generation resources and I was able to
21 compare the approved Biennial combustion turbine (CT) cost per kW
22 with the cost rate per kW for a similarly configured CT with the 2020

1 IRP and, in my opinion, they rates are quite comparable. The
2 Company's Plan B expansion plan identifies 485 MW CT generation
3 units planned for 2023 and 2024 that underlie much of the avoided
4 capacity cost benefits in this proceeding. Furthermore, I believe the
5 fact that the Strategist model has the ability to incorporate a mixture
6 of resources to derive its avoided capacity costs does not necessarily
7 result in costs that are materially different for this proceeding.

8 In the 2019 rider proceeding, witness Williamson stated that the
9 Public Staff would work with the Company to discuss the issue of
10 avoided cost modeling further in the context of the upcoming
11 Mechanism review and in the next rider proceeding. As of the date
12 of this testimony, a Mechanism review has not been initiated by
13 either party. However, discussions between the parties on this matter
14 have taken place.

15 **Q. PLEASE EXPLAIN HOW THE COMPANY'S 2020 IRP IMPACTS**
16 **THE COST-EFFECTIVENESS OF SELECT DSM/EE PROGRAMS.**

17 A. A significant change with the 2020 IRP, as compared to the 2019
18 IRP, is that the system is now considered winter peaking. In that, the
19 winter peak forecast is, on average, over 500 MW larger than its
20 summer peak throughout the fifteen-year forecast. The use of a
21 winter peak forecast makes it difficult for DSM programs to produce
22 cost effective avoided capacity savings for programs that are

1 designed to reduce the peak load during the summer season; such
2 as, with AC cycling. This issue is further addressed by witness
3 Williamson.

4 **Q. DO YOU SUPPORT THE USE OF THE LOAD FORECASTS**
5 **REFLECTED IN THE IRP?**

6 A. Yes. At this point with my investigation with DENC's IRP, I believe
7 that the winter and summer forecasts are reasonable for the
8 calculation of the avoided energy costs and for the need for
9 additional capacity with this proceeding. The IRP reflects the Virginia
10 State Corporation Commission's Order in Dominion's 2018 IRP
11 proceeding² that directed the Company to continue to use PJM's load
12 forecast for the Dominion Zone, which has been done after making
13 certain adjustments to scale the forecast to reflect the Dominion Load
14 Serving Entity. The impact of the shift to winter peaking is highlighted
15 in the in the Company witness Kessler's Exhibit DRK-1, Schedule 4,
16 specifically in the non-cost effective scores for the Air Conditioner
17 Cycling Program which should provide an incentive for the Company
18 to focus more attention to its winter season programs.

19 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

20 A. Yes.

² Docket PUR-2018-00065.

QUALIFICATIONS AND EXPERIENCE

JOHN R. HINTON

I received a Bachelor of Science degree in Economics from the University of North Carolina at Wilmington in 1980 and a Master of Economics degree from North Carolina State University in 1983. I joined the Public Staff in May of 1985. I filed testimony on the long-range electrical forecast in Docket No. E-100, Sub 50. In 1986, 1989, and 1992, I developed the long-range forecasts of peak demand for Duke Energy Carolinas, LLC (DEC) and Duke Energy Progress, LLC (DEP). I filed testimony on electricity weather normalization in Docket No. E-7, Subs 620, and 989; and Docket No. E-2, Sub 833. I filed testimony on funding for nuclear decommissioning costs in Docket No. E-2, Subs 1023 and 1219, and Docket No. E-7, Subs 1026 and 1146. I filed testimony on credit metrics in Docket No. E-7, Subs 1146 and 1214. I filed testimony on the Integrated Resource Plans (IRPs) filed in Docket No. E-100, Subs 114 and 125, and I have reviewed numerous peak demand and energy sales forecasts and the resource expansion plans filed in electric utilities' annual IRPs and IRP updates.

I have been the lead analyst for the Public Staff in numerous avoided cost proceedings, filing testimony in Docket No. E-100, Subs 106, 136, 140, 48, and 158. I filed a Statement of Position in the Avoided Cost arbitration

case involving EPCOR and Progress Energy Carolinas in Docket No. E-2, Sub 966.

I have filed testimony on the issuance of certificates of public convenience and necessity (CPCN) in Docket Nos. E-2, Sub 669, SP-132, Sub 0, Docket No. E-7, Subs 790, 791, and 1134.

I have filed testimony on the issue of fair rate of return in Docket Nos. E-22, Subs 333, 412, and 532; P-26, Sub 93; P-12, Sub 89; G-21, Sub 293; P-31, Sub 125; G-5, Sub 327; G-5, Sub 386; G-9, Sub 351; P-100, Sub 133b; P-100, Sub 133d (1997 and 2002); G-21, Sub 442; W-778, Sub 31; and W-218, Subs 319, 497, and 526; W-354, Sub 360, and 364.

I have filed testimony on the hedging of natural gas prices in Docket No. E-2, Subs 1001, 1018, and 1031. I have filed testimony on the expansion of natural gas in Docket No. G-5, Subs 337 and 372. I performed the financial analysis in the two audit reports on Mid-South Water Systems, Inc., Docket No. W-100, Sub 21. I testified in the application to transfer of the CPCN from North Topsail Water and Sewer, Inc. to Utilities, Inc., in Docket No. W-1000, Sub 5. I have filed testimony on weather normalization of water sales in Docket No. W-274, Sub 160.

I have published an article in the National Regulatory Research Institute's Quarterly Bulletin entitled Evaluating Water Utility Financial Capacity.