August 24, 2018

Mr. Al Christopher, Director Energy Division
Department of Mines, Minerals and Energy
1100 Bank St. #817
Richmond, VA 23219

RE: Comments of the Alliance for Industrial Efficiency, Columbia Gas of Virginia, and Washington Gas on the 2018 Virginia Energy Plan

Dear Mr. Christopher:

The Alliance for Industrial Efficiency, Washington Gas, and Columbia Gas appreciate the opportunity to offer these comments on the 2018 Virginia Energy Plan (the "energy plan"), in addition to verbal discussions held with staff at the Energy Efficiency Subcommittee meetings and separately. The undersigned organizations seek to encourage greater use of CHP in the Commonwealth and look forward to working with the Administration to move these recommendations forward.

We commend the Department of Mines, Minerals and Energy (the "DMME") for leading the stakeholder process and developing the energy plan. This plan will help the Commonwealth reach the goal it established in 2007 to reduce 2022 electricity use by 10 percent of 2006 retail consumption through conservation and efficiency. We are particularly pleased with the Administration's commitment to "lead by example," as outlined in Executive Order 31, which establishes a more ambitious goal to reduce electricity consumption in state facilities by 15 percent by 2017 (using 2009-2010 as a baseline). We strongly agree with the statement by former Governor McAuliffe in the Executive Order, "Increased energy efficiency measures will serve as a stimulus to the growing energy efficiency industry in Virginia, helping create new jobs and diversifying our economy." Virginia can indeed help influence public behavior and public support for energy efficiency through its own efforts and actions. Our comments offer several recommendations that will help achieve both the statewide 10 percent goal and more ambitious 15 percent commitment for state facilities.

Our comments focus on encouraging the deployment of combined heat and power (CHP) and waste heat to power (WHP). These actions would help the Commonwealth recognize the multiple economic, energy efficiency, and greenhouse gas reduction benefits that CHP and WHP provide, as outlined in the section "About CHP and WHP in Virginia" (below). We recommend that DMME develop an energy plan that:

(1) Commits to a statewide CHP and WHP technical potential study;
(2) Sets a CHP and WHP deployment target of 750 MW of new CHP by 2030; and

(3) Creates a CHP and WHP working group with a mission to develop a CHP and WHP roadmap for the Commonwealth.

History of Policymaker Support for CHP in Virginia

We are gratified to see that Virginia policymakers recognize the benefits of CHP and WHP and have taken a number of steps to encourage its use. As an initial matter, the Code of Virginia defines "energy efficiency program" to "include demand response, **combined heat and power and waste heat recovery**, curtailment, or other programs that are designed to reduce electricity consumption so long as they reduce the total amount of electricity that is required for the same process or activity."[1] (Emphasis ours.) We agree with including CHP and WHP within the definition of energy efficiency program because these systems offer significant energy savings benefits, as detailed in the following section.

The Governor and the General Assembly recently recognized the benefits of CHP in the Grid Transformation and Security Act (Senate Bill 966), the 2018 omnibus energy bill, which includes language directing Dominion to consider deploying 200 MW of CHP and WHP by 2024, through either supply-side or demand-side incentives, over the next five years in its next integrated resource plan.

Further, the Administration's Transition Policy Council on Commerce and Trade (the "Policy Council") recognized the value of CHP in its recommendation to develop policies that increase the use of CHP in both the public and private sectors. On December 18, 2017, the Policy Council's Energy Workgroup issued a series of recommendations that included the following:

> Develop policies that increase the use of Combined Heat and Power in both the public and private sectors. In the public sector, higher education institutions are prime candidates for use of this technology given their centralized campus footprint and high energy use. In the private sector, work with the Virginia Manufacturers Association and the regulated utilities to develop a model that educates the business [sic] about CHP and gives the utilities an incentive to promote the use of CHP onsite of large volume consumers.

The 2018 Virginia Energy Plan provides an additional opportunity to encourage greater use of efficient CHP and WHP systems in the Commonwealth.

CHP and WHP Advance the Goals of the Energy Plan

CHP and WHP offer benefits that are consistent with the Commonwealth's Energy Objectives (Va. Code § 67-101), which will guide the energy plan and which include:

[1] Code of Virginia, "§ 56-576. Definitions" (https://law.lis.virginia.gov/vacode/title56/chapter23/section56-576/).

- Using energy resources more efficiently;
- Increasing Virginia's reliance on sources of energy that, compared to traditional energy resources, are less polluting of the Commonwealth's air and waters; and
- Removing impediments to the use of abundant low-cost energy resources located within and outside the Commonwealth and ensuring the economic viability of the producers, especially those in the Commonwealth, of such resources.[2]

By generating both heat and electricity from a single fuel source, CHP dramatically lowers emissions and increases overall fuel efficiency – allowing utilities and companies to effectively "get more with less." CHP can operate using more than 70 percent of fuel inputs – compared to fossil-fueled power plants, which have an average efficiency of 33 percent.[3] As a consequence, CHP can produce electricity with roughly one-quarter the emissions of an existing coal power plant.[4] Due to its scale, a single CHP investment can achieve significant emissions reductions. WHP, which uses waste heat as its energy source to generate electricity and requires no additional fuel and generates no incremental emissions, provides similarly significant benefits. CHP and WHP can produce electricity while lowering costs for both host companies and all of Virginia's utility customers.

Further, CHP enhances electric resiliency and reliability in two major ways.[5] First, because CHP systems have the ability to operate independently of the grid, they can provide reliability during a power outage. Since 1953, there have been 64 disasters that have occurred in Virginia—including 17 severe storms, 15 floods, and 13 hurricanes.[6] For example, in 2016, Hurricane Matthew left 320,000 Virginians without power and caused over $3 million in damage to Virginia's public utility systems.[7] Critical infrastructure, such as hospitals or military installations, and manufacturing facilities with CHP have been able to keep the lights on during power outages that occurred during this disaster and others like it throughout the region.[8] Second,

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[2] Code of Virginia, "§ 67-101. Energy objectives" (https://law.lis.virginia.gov/vacode/title67/chapter1/section67-101/).
[3] U.S. EPA, Mar. 21, 2016, "CHP Benefits" (https://www.epa.gov/chp/chp-benefits).
[4] Natural Resources Defense Council (NRDC), Apr. 2013, "Combined Heat and Power Systems: Improving the Energy Efficiency of Our Manufacturing Plants, Building, and Other Facilities" (http://www.nrdc.org/energy/files/combined-heat-power-ip.pdf); David Gardiner & Associates and Institute for Industrial Productivity, Jul. 2015, "Combined Heat and Power as a Compliance Option under the CPP" (reporting incremental emissions of natural gas CHP of 450 to 600 lbs/MWh, compared to 2000 to 2200 lbs/MWh for coal) (http://www.dgardiner.com/wp-content/uploads/2015/08/CHP-Pathway-Final-Report-8-18-15.pdf).
[5] Alliance for Industrial Efficiency, 2018, "CHP Response in Natural Disaster Mitigation: Delivering Reliability, Saving Lives" (https://bit.ly/2mTDsmk).
[6] Federal Emergency Management Agency, "Data Visualization: Disaster Declarations for States and Counties" (https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties).
[7] Virginia Department of Emergency Management, "Hurricane Matthew – Virginia Impacts" (http://dls.virginia.gov/groups/flooding/impacts101716.pdf).
[8] U.S. Department of Energy, U.S. Department of Housing and Urban Development, and U.S. Environmental Protection Agency, Sep. 2013, "Guide to Using Combined Heat and Power for Enhancing Reliability and Resiliency in Buildings" (https://www.hud.gov/sites/documents/ENERGY_CHP_FOR_RC.PDF).

CHP and WHP systems alleviate burdens on transmission and distribution lines because they depend on localized, on-site electricity generation. In this way, CHP and WHP can help avoid costs associated with investment in and construction of transmission infrastructure. Because of its resiliency and reliability benefits, CHP should be a key element of the Commonwealth's broader efforts to modernize its electric grid and make it more reliable.

The Department of Defense has an essential need for resiliency and reliability in its operations. Virginia is home to numerous military bases, such as Fort Belvoir, Fort Meyer, the Radford Army Ammunition Plant, and Naval Station Norfolk. Further, the U.S. Army has a nationwide goal to double the deployment of CHP to 200 MW by the end of 2018 and triple it to 300 MW by the end of 2020, from a 100 MW baseline.[9] Military readiness is an important benefit that CHP systems can provide Department of Defense facilities in Virginia.

These recommendations will help the Commonwealth tap into the substantial remaining opportunity to increase deployment of CHP and WHP. According to a technical potential study from the Department of Energy, Virginia is in the top third for technical potential in the country (4,308 MW identified at 7,291 sites) with 1,703 MW of remaining onsite technical potential in the industrial sector alone.[10] Yet, deployment lags far behind this potential. To date, Virginia has deployed less than half (37 percent) of its technical potential for CHP. Currently, the state has 50 CHP sites, generating 1,608 MW of clean and efficient power[11] and two WHP sites generating 0.2 MW.[12] A 2016 report from the Alliance for Industrial Efficiency found that if an economically viable portion of the state's CHP and WHP was deployed,[13] Virginia's industrial sector customers would save $1.8 billion on electricity costs from 2016 to 2030,[14] demonstrating the importance of CHP to increasing manufacturing competitiveness.

Virginia is particularly well-positioned for CHP growth because of its robust industrial base and the availability of natural gas. Manufacturing accounts for 9.36 percent ($42 billion in 2013) of the total gross state product and employs over 6 percent of the workforce.[15] Virginia's industrial sector consumed nearly 19 percent of the total energy used statewide in 2013 (or 446.6 trillion

[9] Secretary of the Army, Nov. 1, 2016, "Memorandum for Assistant Secretary of the Army (Installations, Energy and Environment" (https://www.army.mil/e2/c/downloads/457144.pdf).
[10] U.S. Department of Energy, Mar. 2016, "Combined Heat and Power (CHP) Technical Potential in the United States," Table 2 (https://bit.ly/2N7QfN0).
[11] U.S. DOE Combined Heat and Power Installation Database (https://doe.icfwebservices.com/chpdb/state/VA).
[12] Oak Ridge National Laboratory (ORNL), Mar. 2015, "Waste Heat to Power Market Assessment" (https://info.ornl.gov/sites/publications/files/Pub52953.pdf).
[13] Percentage of the state's technical potential for CHP with less than 10-year payback period.
[14] The Alliance for Industrial Efficiency, Sep. 2016, "State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency" (http://alliance4industrialefficiency.org/wp-content/uploads/2016/09/FINAL-AIE-State-Industrial-Efficiency-Ranking-Report_9_15_16.pdf). Unpublished data on results from CHP and WHP deployment alone.
[15] National Association of Manufacturers, Feb. 2015, "Virginia Manufacturing Facts" (http://www.nam.org/Data-and-Reports/State-Manufacturing-Data/2014-State-Manufacturing-Data/Manufacturing-Facts--Virginia/).

British thermal units).[16] Increasing CHP and WHP deployment in the Commonwealth will ultimately help Virginia's industrial sector become more efficient, productive, and competitive, and help critical infrastructure and the military increase the resiliency and reliability of their facilities.

Recommendations for the 2018 Virginia Energy Plan

The following recommendations focus on encouraging the deployment of CHP and WHP in Virginia. These actions would help the Commonwealth recognize the multiple economic, energy efficiency, and greenhouse gas reduction benefits that CHP and WHP provide.

1. *Conduct a statewide CHP technical potential study*

While the Department of Energy published a CHP technical potential study for all 50 states, it does not capture the nuances of CHP potential in Virginia. For instance, the DOE study was limited to CHP potential at existing sites, but does not anticipate potential growth. Therefore, our third recommendation is that Virginia examine the potential for CHP at all current and planned state facilities and develop a statewide CHP technical potential study. This addition would help Virginia achieve its "lead-by-example" goal of reducing state government electricity consumption by 15 percent by the end of 2017, using 2010 electricity usage as the baseline.[17]

We further recommend a sectoral study that examines technical potential for CHP beyond state facilities and includes other potential end users, such as industrial facilities, military installations, and critical infrastructure. Ideally the report would also examine future growth—as the existing DOE technical potential study only considers existing facilities. Finally, we recommend that the technical potential study identify the ten most promising facilities with the largest CHP potential in Virginia in each examined sector. The information gained by commissioning such a study would be extremely valuable in future efforts to expand CHP deployment in the Commonwealth.

2. *Establish a statewide CHP and WHP deployment target*

The Grid Transformation and Security Act (SB 966) directs Dominion Energy to consider deploying 200 MW of CHP and WHP, through either supply-side or demand-side incentives, over the next five years in its next integrated resource plan. We recommend that the 2018 Virginia Energy Plan not only reaffirm Dominion's target, but also establish a more ambitious, statewide deployment target.

[16] U.S. Energy Information Administration, Dec. 2015, "Virginia: State Profile and Energy Estimates" (https://www.eia.gov/state/?sid=VA#tabs-2).
[17] Executive Order No. 31, Oct. 16, 2014, (https://bit.ly/2O3XCGM).

We propose a cumulative target of **750 MW of new CHP and WHP capacity by 2030**. DOE has identified 4,308 MW of technical on-site CHP potential, including 65 MW of WHP potential at *existing* facilities in Virginia.[18] The proposed target thus represents approximately 17 percent of potential deployment.

Although the factors shaping Virginia's energy economy is unique, other states, such as California, Rhode Island, and New Jersey, have more ambitious statewide CHP deployment targets in their state energy plans (see Table 1 for a summary of state CHP deployment targets). Because these states tend to have a more favorable environment for CHP due to being regulated states with a higher spark spread, we recommend a less aggressive target for Virginia. In that context, we believe a 750-MW goal is both ambitious, yet attainable. Further, Virginia has adopted a goal to deploy 5,500 MW of wind and solar by 2023[19]—a substantially more ambitious goal than the proposed CHP target.

Table 1. States with CHP Deployment Targets in Energy Plans

State	CHP Technical Potential[20]	CHP Deployment Target	Percentage of Remaining Technical Potential
California	11,772 MW	6,500 MW by 2030[21]	55%
New Jersey	3,796 MW	1,500 MW by 2021[22]	40%
Rhode Island	616 MW	400 MW by 2035[23]	65%
Proposed: Virginia	**4,308 MW**	**750 MW by 2030**	**17%**

Utility ownership of CHP can be one approach to helping the Commonwealth achieve an ambitious CHP target. Dominion and other Virginia utilities can harness the potential for CHP by offering incentives to support deployment and including utility-owned CHP in their IRPs. Utility-owned CHP is a relatively untapped efficiency resource that can improve grid reliability while reducing operational costs. Utility-owned CHP can provide substantial benefits to utilities and the grid, including:[24]

[18] DOE, *supra* note 10.
[19] Virginia General Assembly, 2018 Session, approved Mar. 9, 2018, "SB 966" (https://lis.virginia.gov/cgi-bin/legp604.exe?181+ful+CHAP0296+pdf).
[20] DOE, *supra* note 10.
[21] California Energy Commission, "2015 Integrated Energy Policy Report" (http://www.energy.ca.gov/2015_energypolicy/).
[22] New Jersey Board of Public Utilities and New Jersey Department of Environmental Protection, Dec. 2015, "New Jersey Energy Master Plan Update" (https://nj.gov/emp/docs/pdf/New_Jersey_Energy_Master_Plan_Update.pdf).
[23] Rhode Island Division of Planning, Oct. 8, 2015, "Energy 2035: Rhode Island State Energy Plan" (http://www.planning.ri.gov/documents/LU/energy/energy15.pdf).
[24] ICF and Sterling Energy Group, Jun. 1, 2017, "Utility-Owned CHP—A Least-Cost Baseload Resource," (https://www.icf.com/resources/white-papers/2017/utility-chp-ownership).

- **Low costs and high capacity factors** – CHP is among the most efficient methods for generating power. Baseload CHP has a higher annual capacity factor when compared to central station options.[25]
- **Less risk** – The planning, permitting, and implementation processes for CHP (2-3 years) are much shorter than that of a large capacity central station generator (6-10 years). Since future utility loads are difficult to forecast, the option of building smaller CHP systems can reduce the risk involved in developing new power generation assets.[26]
- **Strategic location value** – Utility-owned CHP systems can relieve congestion, deferring the need for new T&D investments, while enhancing reliability.[27]

Some utilities in other states are beginning to recognize these benefits. For example, in 2015, Duke Energy began to include a small amount of CHP development and ownership in its integrated resource planning process. As a result, Duke partnered with Clemson University in South Carolina on a 15 MW CHP project that is planned to be operational by 2020.[28] Duke will own the CHP system, while Clemson will purchase all of the steam from the CHP to heat its campus. Through this partnership, Duke and its customers will receive an efficient, low-cost, baseload grid generation asset, while reducing greenhouse gas emissions.

Finally, the State Corporation Commission (SCC) will need to approve any utility integrated resource plans that include a CHP deployment target developed to meet the statewide target. Since the SCC will be a key decision-maker on next steps, they should be engaged in the process.

3. *Create a CHP and WHP working group*

Third, we recommend that the DMME establish a collaborative platform between stakeholders to further explore the potential opportunities and barriers associated with CHP and WHP in Virginia. At a minimum, these stakeholders should include the U.S. Department of Energy Mid-Atlantic CHP Technical Assistance Partnership (CHP TAP), Virginia's electric and gas utilities, and end users (e.g., manufacturers, hospitals, universities, Department of Defense, national security agencies).

We propose the working group assess: (1) CHP's and WHP's value proposition (including exploring the resiliency value of CHP) and (2) barriers to CHP and WHP deployment (including interconnection rules and standby rates), as detailed below.

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[25] *Id.*
[26] ICF and Sterling Energy Group, *supra* note 24.
[27] ICF and Sterling Energy Group, *supra* note 24.
[28] Duke Energy Carolinas, Sept. 1, 2017, 2017 Integrated Resource Plan (Annual Report), at 76 (https://bit.ly/2Lp05sK); *see also* District Energy Magazine, Jan. 16, 2018, "Utility Ownership—a new partnership" (https://bit.ly/2BIKtR9).

We also recommend that this working group seek to produce an interim report by June 2019 and a final report by November 2019 with its findings. As an example, Michigan recently released a "CHP Roadmap for Michigan."[29] This Roadmap was developed in response to the Michigan Legislature's interest in developing a new comprehensive energy plan for Michigan and Governor Snyder's goal of meeting 30 to 40 percent of Michigan's energy demand by a combination of energy waste reduction efforts and renewable energy by 2025. As noted above, the Virginia legislature and administration has expressed similar support for energy efficiency and renewable energy efforts. As such, a Virginia CHP and WHP Roadmap would be an appropriate next step. We recommend that the working group inform the plan, while the Commonwealth explores the possibility of funding it with potential assistance from the Department of Energy.[30]

a. The Value Proposition for CHP and WHP

Several elements influence CHP's and WHP's true value proposition. As elaborated above, benefits of CHP and WHP include:

- CHP and WHP systems can increase energy reliability and resiliency;
- Higher efficiency of CHP systems results in lower operating costs;
- Higher efficiency offers opportunities for lowered emissions;
- On-site generation reduces grid congestion and avoids distribution costs;
- WHP systems generate power from a waste resource without any incremental emissions, thereby reducing the site's carbon footprint and fuel costs.

We recommend this working group examine how these benefits will manifest in Virginia. We also recommend that the working group prioritize exploring the reliability and resiliency benefits of CHP—priorities of Virginia's grid modernization efforts. The output of this working group should also be used to inform Virginia's forthcoming resiliency plan.

As a starting point to explore the resiliency value of CHP, we recommend that the working group consider the recent report from the American Council for an Energy-Efficient Economy, "Valuing Distributed Energy Resources: Combined Heat and Power and the Modern Grid."[31] This report explores the ways in which utilities, insurance companies, cities, investors, and energy users are valuing (or not valuing) CHP systems' abilities to withstand high-consequence events. The

[29] Michigan Agency for Energy, 5 Lakes Energy, Sustainable Partners LLC, Energy Resources Center, NextEnergy, Feb. 2018, "CHP Roadmap for Michigan" (https://bit.ly/2viAH1L).
[30] Note that the Michigan CHP Roadmap was supported by the U.S. Department of Energy and the Michigan Agency for Energy under Award No. DE-EE0006226.
[31] American Council for an Energy-Efficient Economy (ACEEE), Apr. 2018, "Valuing Distributed Energy Resources: Combined Heat and Power and the Modern Grid" (http://aceee.org/white-paper/valuing-der).

report also provides a proposed framework for measuring the resiliency value of distributed energy resources.

The working group may also recommend a path forward to finance projects. One promising model is the New Jersey resiliency bank, which allocated $200 million for CHP projects. The bank was created utilizing Community Development Block Grant-Disaster Recovery funds allocated to New Jersey by the U.S. Department of Housing and Urban Development.[32] The grants have been fully subscribed, with three public owned water treatment works and ten hospitals receiving project funding through the resiliency bank.[33]

Finally, the working group should examine the effect of spark spread in predicting CHP deployment. Spark spread is the difference between the price received by a generator for electricity produced and the cost of the natural gas needed to produce that electricity.[34] While not the only factor influencing viability of projects, typically the larger the difference in spark spread, the higher the likelihood the project will be economically feasible.[35] Virginia typically has a low average spark spread. A recent report from the Houston Advanced Research Center (HARC) found that spark spread may be a larger factor than resilience for predicting CHP deployment, suggesting it is essential to find methods to bring down CHP costs.[36]

The working group should include this consideration as part of their discussions and work together to develop a series of recommendations for the Administration, such as supporting legislative action that would help reduce CHP and WHP costs.[37] Additionally, there will be a need to support efforts by Dominion to achieve its 200 MW CHP target. It will be important for the working group to consider how Virginia will explore providing financial support through, for example, utility incentives or ownership.

b. Barriers to CHP and WHP

We also recommend that the working group examine potential barriers to CHP that may be present in Virginia, such as interconnection standards. Facilities with CHP systems usually require supplemental and/or standby/back-up service from the utility to provide power needs over and above the output of the CHP system and during periods when the system is down due to routine maintenance or unplanned outages. Interconnection rules detail the technical requirements and procedural process by which an electric-generating unit is connected to the

[32] New Jersey Economic Development Authority, "Energy Resiliency Bank" (https://www.njeda.com/erb/erb-(1)).
[33] Personal communication with the MidAtlantic CHP Technical Assistance Partnership.
[34] Energy Information Administration, Feb. 8, 2013, "An introduction to spark spreads" (https://www.eia.gov/todayinenergy/detail.php?id=9911).
[35] Houston Advanced Research Center (HARC), "How Do Extreme Weather Events Impact Investment in Combined Heat and Power?" (https://bit.ly/2Kfzcai).
[36] *Id.*
[37] DSIRE, NC Clean Energy Technology Center, May 24, 2017, "Energy Equipment Property Tax Exemption" (http://programs.dsireusa.org/system/program/detail/1683).

grid. These standards are needed to ensure that both the end-user and the utility's reliability and safety needs are considered. A key to CHP's ultimate market success is the ability to safely, reliably, and economically interconnect with the utility grid system. The lack of standard uniformity in interconnection rules makes it difficult for equipment manufacturers to design and produce modular packages and reduces the economic incentives for on-site generation. Predictable interconnection rules based on industry technical standards and application processes that limit financial uncertainty and delays can encourage CHP projects. Some WHP projects require interconnection and face similar issues, while other projects do not interconnect. While Virginia's interconnection standards are modeled on FERC interconnection standards for small generators, we nonetheless encourage the working group to examine Virginia's interconnection standards to determine if there is any opportunity for improvement.

Standby rate design could also pose a potential barrier to CHP and WHP deployment. In order to determine whether standby rates create a barrier to CHP and WHP deployment in Virginia, the rates of the utilities in the state should be analyzed by an outside consultant—an issue that the working group could discuss and determine next best steps. Such a standby rate analysis may be similar to the analysis discussed in a recent 5 Lakes Energy white paper, which compares the standby rates that a hypothetical 2-MW CHP system would have to pay in different utility territories.

Conclusion

We thank DMME for the opportunity to provide recommendations for the 2018 Virginia Energy Plan. As elaborated above, CHP and WHP provide substantial emissions and cost savings benefits to all Virginians. We urge DMME to develop an energy plan that:

1. Commits to a statewide CHP technical potential study;
2. Sets a CHP and WHP deployment target of 750 MW of new CHP by 2030; and
3. Creates a CHP and WHP working group with a mission to develop a CHP and WHP roadmap for the Commonwealth.

We are grateful for the emerging recognition of the benefits of energy efficiency generally and CHP and WHP specifically among Virginia policymakers and believe that the inclusion of these recommendations in the energy plan will further encourage efficient CHP and WHP investments in the Commonwealth.

Sincerely,

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Alliance for Industrial Efficiency

Brentley K. Archer
President and COO
Columbia Gas of Virginia

Steven Jumper
Director of Corporate Public Policy
Washington Gas