

Virginia 2018 Energy Plan



CHP
TECHNICAL ASSISTANCE
PARTNERSHIPS

Plan Description

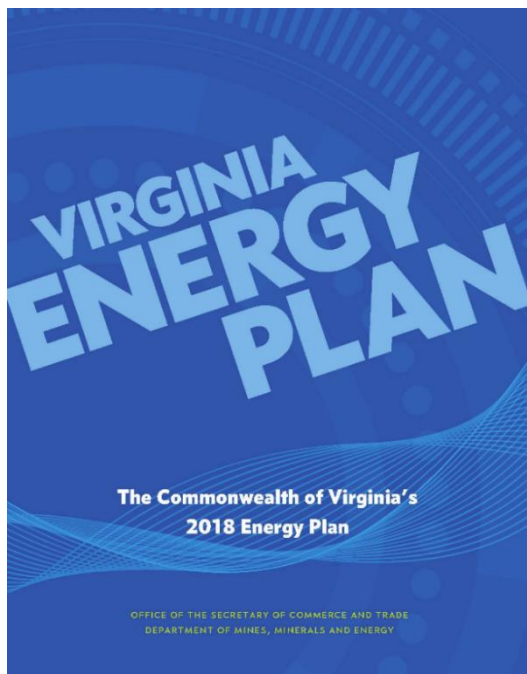
The Commonwealth of Virginia's 2018 Energy Plan presents a status update on the state's current energy system and a set of forward-looking recommendations to enable the energy transformations that are underway.¹ The statewide 2018 Energy Plan represents the first time the Commonwealth has recognized combined heat and power (CHP) as an important energy efficiency, CO₂ reduction, and resilience asset. The plan includes several references to CHP:

- Virginia has 4,308 MW of technical on-site CHP potential, including 65 MW of waste heat to power (WHP) potential at existing facilities, according to the U.S. Department of Energy's 2016 report on technical potential for CHP.
- The number of CHP installations in Virginia lags behind several of the mid-Atlantic and northeastern states.²
- CHP installations for mission-critical facilities such as hospitals, military installations, and emergency management centers could help these entities reduce energy costs, improve power reliability, and be better prepared for power outages.
- Increasing the use of CHP systems also facilitates the transition to a more distributed grid, and CHP can be installed in combination with distributed solar resources and microgrids.

The CHP recommendations in the 2018 Energy Plan include the following:

- The Commonwealth should establish a cumulative CHP target of at least 750 MW by 2030.
- The Virginia Department of Mines, Minerals and Energy (DMME) should develop a roadmap for CHP deployment that explores investment in CHP through utility-sponsored programs, public buildings, and the private market.

Plan Development



In 2018, the Virginia legislature passed Senate Bill (SB) 966, also known as the Grid Transformation and Security Act, which required that Dominion Energy, the state's largest electric utility, consider CHP in its next integrated resource plan:

That Dominion Energy shall consider in its integrated resource plan next filed after July 1, 2018, either as a demand-side energy efficiency measure or a supply-side generation alternative, whether the construction or purchase of one or more generation facilities with at least one megawatt of generating capacity, having a measurable aggregate rated capacity of 200 megawatts by 2024, that use combined heat and power or waste heat to power and are located in the Commonwealth...

The treatment of CHP and WHP in SB 966 was an important first step in gaining recognition for these power sources in the 2018 Energy Plan and laid the groundwork for stakeholders to engage with Dominion.

DMME is responsible for developing an energy plan every four years. As part of the 2018 process, the Department constructed five specific policy

¹ <https://www.governor.virginia.gov/media/governorvirginiagov/secretary-of-commerce-and-trade/2018-Virginia-Energy-Plan.pdf>

² <https://betterbuildingsolutioncenter.energy.gov/sites/default/files/tools/Virginia.pdf>

tracks: (1) Solar and Onshore Wind, (2) Offshore Wind, (3) Energy Efficiency, (4) Energy Storage, and (5) Electric Vehicles and Advanced Transportation.³

The DMME also facilitated a stakeholder engagement process in developing the plan, which included:

- Six public listening sessions held June–August 2018 to gather general public comment
- A 60-day written comment period, during which 988 comments were filed
- A series of facilitated stakeholder engagement meetings held to bring together interested parties covering each of the five technology topics.

In addition, DMME met with the Alliance for Industrial Efficiency and the CHP Technical Assistance Partnership (TAP) in September 2018 to better understand the technical role CHP might play in the 2018 Energy Plan.

Partners

The partnership with the Alliance for Industrial Efficiency was instrumental in moving the CHP discussion in Virginia forward. The Alliance is a coalition of business, labor, non-profit organizations, and educational institutions that educate the public and decision makers and advocate for policies that increase U.S. manufacturing competitiveness through industrial energy efficiency, including the use of CHP and WHP. With support from the Energy Foundation, the Alliance helped engage policymakers and other stakeholders on CHP issues in the state capitol of Richmond. The Alliance successfully engaged its members, which include Pennsylvania State University and Virginia’s two largest natural gas utilities, to form a group of stakeholders in Virginia that helped advance CHP policy in the Commonwealth. The TAP provided technical assistance and analytical support to the Alliance and other CHP stakeholders. The effort is now focused on assisting Dominion Energy with conducting its 2020 integrated resource planning (IRP) analysis and helping DMME develop a roadmap for CHP deployment.

Summary of Plan Results and Outcomes

The 2018 Energy Plan sets a CHP target of 750 MW by 2030 and requires that DMME develop a roadmap for CHP deployment. While the target is non-binding, it sets the requirement for DMME to create a roadmap to achieve the target. DMME is now in discussion with the CHP TAP on resources available to best understand CHP’s potential in Virginia.

Notable Highlights

- Partnering with the Alliance for Industrial Efficiency was essential to achieving positive results.
- Working with key local stakeholders, including gas utilities, was important in this effort.
- New utility business models should be explored and used, especially where spark spreads are low, to help achieve state CHP targets.⁴
- Virginia utilities are allowed to own generation and may pursue opportunities to own CHP systems at customer sites.

For More Information

U.S. DOE MID-ATLANTIC CHP TECHNICAL ASSISTANCE PARTNERSHIP (CHP TAP)
www.machptap.org

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³ <https://www.governor.virginia.gov/media/governorvirginiagov/secretary-of-commerce-and-trade/2018-Virginia-Energy-Plan.pdf>

⁴ For more information on utility ownership, see <https://www.icf.com/insights/energy/utility-chp-ownership> and

https://aceee.org/files/proceedings/2017/data/polopoly_fs/1.3687854.15011590371/filesserver/file/790254/filename/0036_0053_000066.pdf