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SUSTAINABILITY PLAN

VERSION 4
April 15, 2021

As a renewable energy leader in the Commonwealth of Virginia, we recognize that our electric distribution cooperative can set an example for others to follow in preventing climate change through the reduction and/or elimination of carbon in the energy sector. Transitioning to carbon-free energy sales may be the greatest challenge we face as an electric utility. We feel compelled to lead the way in seeking to de-carbonize all forms of electric generation while ensuring that customers continue to receive safe, affordable, and reliable power. We fully intend to rise to this challenge, and this sustainability plan will be our roadmap. It is intended to be a living document that is revisited and updated over time as technologies advance, markets change, and new opportunities and challenges arise both internally and externally.

Expanding our customers' access to locally generated renewable energy through our Solarize**BARC** program is the cornerstone of our sustainability plan and one of our top cooperative priorities. By necessity, our plan is a multi-faceted approach, taking into account all of our power suppliers and carbon-free generation resources, as well as solar net metering, and the purchase of renewable energy credits (RECs), emission-free energy certificates (EFECs), and other carbon-free resources to fill the gaps currently necessary to meet our goals.

Our ultimate goal is to provide our customers with 100% carbon-free power that is safe, affordable and reliable. However, we recognize that technological advancements and cost reductions must still occur to accomplish our mission. Our immediate goal is to first achieve carbon neutrality, and this is our roadmap. The good news is we are already well on our way.

SolarizeBARC. As mentioned above, the cornerstone of our sustainability plan is our Solarize**BARC** program. Solarize**BARC** is a combination of utility scale, rooftop, battery storage, and community solar programs that maximize our customers' access to carbon-free sources of power that best suit individual needs. [Figure 1](#) provides a summary of "in front of the meter" distribution resources that feed into our total power supply. [Figure 2](#) provides a summary of the total "behind the meter" net metering systems. These systems supplant the consumption of carbon-based sources of energy. We allow customers to carry forward monthly net metering credits on a kilowatt-hour (kWh) basis. All unused net metering credits as of calendar year end are accounted for in this plan.

FIGURE 1

Program Type	Energy Production	Percentage of BARC's Sales
Community Solar 1 (Highland Belle)	760 MWh	0.4%
Community Solar 2 (Holocene – Bustleburg)	2,063 MWh	1.2%
Utility Scale Solar (Holocene - Bustleburg)	2,063 MWh	1.2%
Utility Scale Solar (Holocene – Millboro)	8,250 MWh	4.6%
TOTAL	13,135 MWh	7.3%

FIGURE 2

Net Metering Systems (as of YE 2020)	Installed Capacity
Total residential capacity installed	1,014 kW
Total non-residential capacity installed	0 kW
Total non-profit and non-jurisdictional capacity installed	1,054 kW
TOTAL	2,068 kW

Purchased Power. Power that is not generated locally is purchased from our various power suppliers under long-term power purchase agreements. The power we receive under these purchases comes from a mix of generation resources. [Figure 3](#) below details the current state of our carbon-free power supply resources:

FIGURE 3

Power Supplier	Resource Type	Percentage of Total Supply	Percentage of BARC's Sales	Effective Percentage of BARC's Supply
Old Dominion Electric Cooperative	Nuclear (North Anna)	15.6%	72%	11%
Old Dominion Electric Cooperative	Solar (Hecate)	0.4%	72%	0.28%
Southeastern Power Administration	Hydro	100%	7%	7%

TOTAL				18.28%

Forecasted Additions. Additional carbon-free power supply resources are in various stages of development and are expected to become operational in the near term. As these projects come online, they decrease BARC’s reliance on fossil-fueled sources of generation in our purchases. [Figure 3](#) details these projects:

FIGURE 4

Power Supplier	Resource Type	Percentage of Sales	Percentage of BARC’s Sales	Effective Percentage of BARC’s Supply
Old Dominion Electric Cooperative	Solar (EDF)	TBD	72%	TBD
Old Dominion Electric Cooperative	Solar (Lincoln)	1.4%	72%	1%
Old Dominion Electric Cooperative	Solar (Other)	TBD	72%	TBD
TOTAL				1%

Renewable Energy Credits/Emission-Free Energy Certificates/Etc. The final piece to our sustainability plan is the acquisition of RECs, EFECs, and other credits from non-greenhouse gas emitting resources. REC and EFECs are fungible commodities that represent the non-carbon emitting attributes of power supply resources. By utilizing these resources, we can fill our supply gaps to achieve carbon-neutrality. Although the physical power associated with these resources does not flow to our customers, our ownership of the attributes entitles us to legally apply them to our energy sales. Although this doesn’t make us carbon-free, it does enable us to become carbon-neutral.

Putting it all together. From locally grown solar resources to power supply purchases to EFECs and RECs, electric distribution is nothing if not complex. We endeavor to reduce the complexity as much as possible so that our goals are easily grasped by our customers. [Figure 5](#) below outlines our current fifteen-year sustainability plan towards achieving 100% carbon neutrality.

	2020 ACTUAL	2021	2022	2023	2024
Energy Sales	170,000 MWh	182,000 MWh	184,000 MWh	185,000 MWh	187,000 MWh
Solarize BARC	0.44%	7.7%	7.7%	7.7%	7.7%
Carbon-Free Purchases	11.6%	18.3%	18.3%	18.3%	18.3%

Renewable Additions	0%	1%	1%	1%	1%
Carbon-Free Attribute Purchases	7%	3%	8%	13%	18%
Carbon Neutrality	20%	30%	35%	40%	45%

	2025	2026	2027	2028	2029
Energy Sales	189,000 MWh	191,000 MWh	193,000 MWh	195,000 MWh	197,000 MWh
Solarize BARC	10.7%	10.7%	10.7%	10.7%	10.7%
Carbon-Free Purchases	18.3%	18.3%	18.3%	18.3%	18.3%
Forecasted Additions	1%	1%	1%	1%	1%
Carbon-Free Attribute Purchases	20%	25%	30%	35%	40%
Carbon Neutrality	50%	55%	60%	65%	70%

	2030	2031	2032	2033	2034
Energy Sales	199,000 MWh	201,000 MWh	203,000 MWh	205,000 MWh	207,000 MWh
Solarize BARC	13.7%	13.7%	13.7%	13.7%	13.7%
Carbon-Free Purchases	18.3%	18.3%	18.3%	18.3%	18.3%
Forecasted Additions	1%	1%	1%	1%	1%
Carbon-Free Attribute Purchases	42%	47%	52%	57%	62%
Carbon Neutrality	75%	80%	85%	90%	95%

	2035
Energy Sales	211,000 MWh
Solarize BARC	13.7%
Carbon-Free Purchases	18.3%
Forecasted Additions	1%

Carbon-Free Attribute Purchases	67%
Carbon Neutrality	100%