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Tobacco's hazy future as key Virginia crop

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For tobacco growers on Virginia's Old Belt, as for the nation's No. 1 cigarette-maker, Henrico County-based Altria Group, the future looks like one with an ever-shrinking number of American smokers.

It's a lot more expensive to buy cigarettes than it was 25 years ago, when the Tobacco Master Settlement Agreement put cigarette makers on the hook to pay billions of dollars a year to states, to compensate them for what their Medicaid systems paid for smokers' health care.

A pack of cigarettes that now averages about $7.68 in Virginia — below the national average of $8.41 and far below New York's $12.89 — typically cost around $2 a pack before the master settlement pushed prices higher.

Virginia raised its cigarette tax to 60 cents a pack from the 1998 level of 2.5 cents, but it is still well below the average state's levy of $1.93. (The large difference between the comparatively low cigarette taxes in Virginia and the much higher taxes in New York has long made cigarette smuggling from south to north a lucrative illegal racket.)

A big part of the idea behind the settlement, in addition to reimbursing states for the costs of health care for smokers, was that costlier cigarettes would discourage smoking.

It also started Altria thinking about other ways its customers could use tobacco than to set it on fire and inhale smoke, with its cancer- and disease-causing gases and particles, said CEO Billy Gifford, who joined the company a few years before the settlement.

Altria's future is smoke-free tobacco, he says. Beyond its 200-year-old Copenhagen brand snuff, that includes a range of devices and technology to deliver nicotine, the addictive ingredient in tobacco.

Cigarettes and cigars still account for nearly 90% of Altria's operating income. Last year, even though revenue from cigarettes and cigars declined by nearly 2%, to $22.48 billion, operating income rose 3% to $10.69 billion. (Operating income is what Altria received after paying for tobacco, paper, filters and other ingredients; salaries for the people who made its cigarettes and cigars; as well as taxes, selling expenses and overhead.)

Virginians, including high school students, are more inclined to use tobacco than other Americans, according to the Campaign for Tobacco Free Kids, which says health care costs in Virginia for smoking-related diseases total $3.6 billion annually.

“How can they say they are committed to harm reduction if they are still selling cigarettes?” said Joanna Cohen, director of the Institute for Global Tobacco Control and professor of public health at Johns Hopkins University.

“It’s past time to finally end the awful, industrially produced tragedy of the tobacco epidemic,” she said.

The growers’ challenge

The price of tobacco leaf, meanwhile, isn’t really growing. That’s driving change on the Old Belt — and on the flatter lands to the east.

A Richmond Times-Dispatch analysis of Census Bureau agriculture surveys found that the average price Virginia growers received fell from $1.61 a pound in 1997 ($3.07 in current dollars) in the last census survey before the settlement quota, to a low of $1.57 a pound in 2007, in the first survey that came after the quota buyout. The average price rose to peak at $2.47 a pound in 2017, the latest survey.

In 2021, the latest data from excise tax receipts puts the Virginia average at $2.12 a pound.

To make it with lower, inflation-adjusted prices, growers need more land. Virginia growers were planting an average of 75 acres in 2017, up from 22 in 1997. More acres mean more leaf. That means more land and more equipment, which means more debt to pay interest on.

But tobacco has moved away from the Old Belt, that strip along the Virginia-North Carolina state hill, where the land starts rising from the flat coastal plain toward the Blue Ridge.

The buyout, with the ending of the quota system, added to the pressure on the Old Belt.

While for many growers there, the money was a way to fund retirement, it was not really enough for those who used it as financial cushion to try what were generally unsuccessful efforts to replace tobacco with other, similarly high dollar-per-acre crops like broccoli, or who simply thought they could keep raising tobacco the way they had.

But to the east, especially in the flatter fields of Mecklenburg County, which had only small quotas, some growers used the buyout money to expand their acreage and to mechanize their operation, much on the pattern seen along Interstate 95 in North Carolina or farther south in Georgia and Florida.

In Mecklenburg, a Southside county about 100 miles from Richmond, where tobacco growing is on the rise, some farmers harvest hundreds of acres. They operate with crews of a dozen or more, using mechanized picking machines, instead of pulling leaf by hand, the way Michael Thompson does on his fields around Pittsylvania County's Kentuck community.

"On the Old Belt, we're still doing things the way we did a century ago," said Stephen Barts, a tobacco specialist with Virginia Cooperative Extension.

On the Old Belt, though, Thompson these days can look across the field of early variety tobacco next to his house, to the other side of the bowl the hills form, to an even larger spread of his plantings. Drive half a mile down and then steeply up a graveled farm road and cross state Route 729 and he has still more fields: 300 acres in all.

He plants four different varieties, maturing at four different times, which means he and his crew can pick tobacco pretty steadily.

He cures the leaf in 41 modern barns — unlike the old days, there's no stove in these.

There's a heat pump outside with fans to circulate hot air through the barn — that cuts the fumes that could leak from a stove, which reduces the formation of the tobacco specific nitrosamines that can be particularly virulent carcinogens.

Tending 300 acres of tobacco and minding 41 barns means he cannot manage the way old-time growers did: checking a barn four or five or more times a day to gauge temperatures, and the wet bulb thermometer that measured humidity — how fast water was being heated out of the tobacco — as well as color and whether the stems were ready to fall.

Thompson, like most growers these days, has invested in an automated control system to monitor temperature and humidity and save him most of those trips to the barns during the week that any one batch of tobacco is curing.

It can be a complicated dance to make sure barns are ready when leaf is ripe.

Stopping

And some growers just aren't dancing.

"At the end of last year, I did the numbers and figured out what I needed for a contract price; the contract offer was half that," Barts said. "This is the first season in six generations where someone with my last name won't be growing tobacco."

The contract covers the price and pounds; growers get them — and either sign up or give up — early in the year, generally, but not always, before they need to start seeding in their greenhouses.

“A lot of what buyers want is outside what growers control,” Barts said. “A wet year will give you more of the higher color X buyers want; if you contract solely with a company that wants deeper color, you’d miss out.”

And these days, it is the buyer, not an independent U.S. Department of Agriculture grader, who assesses the quality of leaf.

Depending on what dealers and manufacturers need, the same leaf might be graded two different ways.

Contracting, that is, does not really change the risk of farming.

If there’s big money involved in the cost of buying enough modern barns and monitoring gear, to say nothing of securing more land, there’s even bigger money involved as cigarette makers look to cope with declining cigarette sales.

Altria spent more than $630 million to acquire the on! nicotine pouch products. Even as traditional oral tobacco sales slide, including the company’s 200-year-old Copenhagen brand, sales of on! have soared — up 43% in the first half of 2023, to more than 55 million packs.

Altria believes the pouch should appeal to dippers — oral tobacco users — who want a product they can use to hold in their mouths and that does not require spitting, which can be uncomfortable in some social settings, said Altria chief operating officer Jody Begley. Altria will apply for preliminary FDA approval for this product next year.

But the company’s investment in other alternatives to cigarettes dwarfs that.

This spring, Altria paid $2.75 billion to acquire the e-cigarette firm NJOY that puts Altria in a strong position in the biggest market of tobacco users who prefer not to smoke. The move came on the heels of a more than $12 billion hit from shedding its connection with the controversial vaping firm Juul.

NJOY has received six of the 23 of the FDA marketing orders that allow legal sale of e-cigarettes. NJOY’s marketing orders include the ACE device, three ACE tobacco-flavored pods and two tobacco-flavored disposable products.

Altria expects its field sales force will give NJOY’s products a major boost at the 200,000 retail outlets where they work to design customized ways to reach consumers. NJOY’s leading ACE brand has been available only in about 33,000 stores.

So far, the company’s salespeople have secured space and permanent sales displays for ACE devices and pods at the 25 convenience store chains that sell the most e-cigarettes. By the end of the year, they expect the number of stores selling ACE will reach 70,000.

Meanwhile, NJOY is working on a Bluetooth-based technology that could lock NJOY devices if an underage individual tries to use one.

Now, Altria is asking the Food and Drug Administration to issue pre-market tobacco product orders, allowing it to market menthol and two non-tobacco flavored ACE pods.

The company said there is significant evidence that flavors play an important role in helping smokers move to smoke-free products, while the Bluetooth technology will limit risk of underage use.

Altria, meanwhile, expects to file with the FDA in 2025 for preliminary permission to market a Richmond-made, Marlboro-based stick to be used with a heating device that Japan Tobacco has developed.

The different ways each of these new products appeal to smokers — from the discretion of a pouch, to that cigarette-like tap and first drag that a heated stick provides — have grown from years of research about smokers that just last year included interviews with approximately 50,000 tobacco consumers and analysis of more than 4.5 billion sales.

R.J. Reynolds, which makes Camel cigarettes, is also looking to develop a line of smoke-free products, including its VUSE e-cigarettes, snus — powdered tobacco for oral use — and nicotine replacement therapy products, including gum.

Its parent company, British American Tobacco, reported that its U.S. sales of e-cigarettes last year rose 63% to 913 million British pounds, or more than $1.1 billion. Its sales of oral tobacco pouches increased more than 40-fold to 36 million pounds, or about $45 million. At the same time, its cigarette volume was down 15% to 59 billion cigarettes after a 5% decline in 2021.

Reynolds said its strategy encourages the migration of adult smokers to smoke-free tobacco products, asserting that demand for them reflects social pressure to reduce smoking in public.

Imperial Tobacco's ITG Brands, the third-largest tobacco company in the U.S. and the maker of Winston, Kool and Salem cigarettes, also moved into the vaping business with its blu electronic cigarettes.

Liggett Group, meanwhile, after selling its L&M, Lark and Chesterfield brands to Altria's predecessor company, now concentrates on discount cigarettes.

Like Altria, they also buy Virginia leaf, although these days, the biggest buyers, including Philip Morris International, Japan Tobacco and Chinese firms, are focused on smokers outside the U.S.

Looking ahead

If Big Tobacco — Altria and BAT's R.J. Reynolds — see a future in marketing smoke-free products, as a way of offering cigarette smokers reduced harm products, many public health advocates feel regulators and states are going along too easily.

One sign of that is that some states are considering lower taxes on lower-risk products authorized by the FDA.

In a key move earlier this year, the FDA authorized Altria's U.S. Smokeless Tobacco Co. to market Copenhagen Classic Snuff as a modified risk tobacco product with the claim that "Switching completely to this product from cigarettes reduces risk of lung cancer."

A joint protest filed by the American Cancer Society, the American Academy of Pediatrics, the American Heart Association, the American Lung Association and the Campaign for Tobacco Free Kids said the product should be taken off the market because it contained the carcinogen N-Nitrosonornicotine and because snuff users often continued smoking while too many young people took up using oral tobacco products, as well as e-cigarettes.

It took five years for Altria to win this authorization, and public health groups have been actively opposing other applications asking the FDA to allow oral tobacco products to claim they reduce health risks.

The FDA allowed Swedish Match to make a narrower reduced-risk claim for its oral tobacco products; Altria's wording was the first the FDA approved without requiring any changes.

The public health groups have said they are concerned that reduced-risk claims do not look closely enough at teenagers' tobacco use.

Altria CEO Gifford, meanwhile, has said underage smoking and use of oral tobacco are at record lows and that the latest surveys from the Centers for Disease Control and Prevention suggest minors' use of e-cigarettes seems to be sliding.

Altria says its research efforts — much of them focused on what leads people to smoke or use tobacco — have found young people have little interest in starting to use tobacco by trying its fast-growing on! nicotine pouches or the heated tobacco stick or tobacco capsule products it hopes to launch with its Japan Tobacco joint venture or its new SWIC product, said Altria COO Begley.

"The tobacco industry is using these products as an on ramp for new consumers to start using their products and as a vehicle to maintain existing consumer interest," Cohen said at the Institute for Global Tobacco Control.

“When e-cigarettes were first released in the U.S., a major e-cigarette manufacturer actually lobbied the FDA not to regulate these products as tools to stop smoking. That tells us all we need to know; they want to use these products to addict new consumers.”

Like many others involved with public health, Cohen said it is critical to focus on developing plans for phasing out commercial sales of cigarettes, much as New Zealand has done by making it illegal to sell tobacco products to anyone born after Jan. 1, 2009.

Looking to the future

Gifford, Altria’s CEO, believes there’s more regulatory and public support for efforts that encourage people who cannot or will not quit nicotine, the addictive chemical in tobacco, to try to get a dose in ways that do not involve inhaling smoke and the 93 cancer- and disease-causing chemicals it contains.

With the master settlement, Altria sees its future tied tightly to FDA regulation — and enforcement of those regulations, Gifford said. The marketing orders now in hand for NJOY devices and pods, like the orders Altria is and will be seeking for its other new smoke-free products — a new version of on!, the heated sticks from its Japan Tobacco joint venture and the SWIC heated tobacco capsules — mean a scientific review of what they deliver and a requirement that Altria accurately say what the risks of use are.

That does not currently happen with a lot of the vaping devices actually on the market, he said.

With youth smoking plummeting, and half of adult smokers looking for alternatives, pointing to an ever-shrinking market, Altria’s long-term future will be largely about technology — the technology of heating items, of letting ingredients flow through the filtering textiles that the company’s on! products develop, of those high-speed machines at the Richmond manufacturing center that can place slugs of tobacco in fragile paper without tearing it, Gifford said.

That future includes bringing its smoke-free tobacco products to a worldwide market. But it also includes looking beyond tobacco, Gifford said.

Altria, for instance, bought a 45% stake in Cronos Group, a Toronto-based cannabis products firm, for $1.8 billion in 2021.

His adult children, for instance, do not smoke. When they take a break from their work — teaching high school students, treating the medical needs of animals, running an accounting practice — they tend to reach for an energy drink.

“Is there technology that we could apply that would allow consumers to experience the same thing they’re getting from an energy drink in a different format that would disrupt that category?” Gifford said.

“It’s all about the break,” he said, pointing to the markets, other than tobacco, where Altria sees future possibilities.

And 25, 50 years in the future?

“We will be in business,” he said.

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With fewer smokers, Va. growers, cigarette makers seek new markets

https://richmond.com/news/state-regional/government-politics/tobacco-virginia-smokers/article_56ca28f8-4e52-11ee-bfe9-b7239bd8882a.html

KENTUCK — In the bowl formed by green, rolling hills just south of the Pittsylvania County crossroads hamlet of Kentuck, the last footlong “tips” — the top leaves — are off Michael Thompson’s long rows of chest-high tobacco plants.

He and his crew pulled the big lugs and cutters from the lower half of the plants in late summer. “Leaf” grade mid-stalk leaves followed. Now, the tobacco crop from the Virginia Old Belt is in, harvested pretty much the way it has been for more than a century.

The tobacco in the bales Thompson loads on his fifth-wheel truck trailer looks pretty much the way bright or flue-cured tobacco has since the 1830s, when an enslaved man named Stephen Slade used some quick-burning charcoal to restart a fire in a curing barn and noticed that the surge of heat turned the leaf bright yellow.

Tobacco growing — the base from which Virginia was settled — is shrinking fast.

There were just 306 Virginia tobacco farms in 2017, the latest year for which figures are available, down from 895 in 2007 and 6,067 in 1997. That was a year before the Tobacco Master Settlement Agreement in which tobacco companies agreed to pay states billions of dollars per year to settle state lawsuits that sought to recover health care costs related to tobacco illnesses.

Tobacco was the leading cash crop in Virginia as late as 2003 before falling behind such crops as tomatoes, soybeans and corn. Tobacco is no longer among Virginia’s top 10 agricultural products in cash receipts for farms, ranking far behind such commodities as chickens raised for meat production, cattle and calves, turkeys, dairy products and soybeans. But in 2022, tobacco products were among Virginia’s top five agricultural and forestry exports at $215 million.

Some 137 miles up the road, Altria Group’s big Philip Morris USA plant in South Richmond makes billions of cigarettes in a football field-sized plant filled with a modern version of the nearly 150-year-old Bonsack machine that first mass-produced cigarettes made out of that Old Belt leaf. Most of the tobacco those machines roll into the tubes of flimsy thin cigarettes that fly through their works is still from the Virginia and North Carolina Old Belt.

Far fewer people smoke these days — 50 years ago, more than 4 out of 10 American adults smoked; these days, it's more like 1 out of 9.

While the Richmond plant still churns out the nation's most popular cigarette — Marlboro, which accounts for more than 40% of the U.S. cigarette market and more than half of the largest, non-discount, segment of that market — it's also making Altria's new "on!" brand pouches of tobacco-derived nicotine.

Altria CEO: 'We're not interested in attracting people to cigarettes'

The plant will also run a pilot line of tobacco capsules that would be heated in a handheld device similar to an e-cigarette.

The capsules would deliver something that tastes more like a cigarette than vaping does, but it would not look as much like cigarettes as the new Marlboro-like sticks that the Richmond center will also make for Altria's joint venture with Japan Tobacco to market that firm's heating device with Marlboro-style sticks.

Finding alternatives to burning tobacco in a cigarette — which generates more than 90 cancer-causing and toxic gases and particles — is where Henrico County-based Altria sees its future, CEO Billy Gifford told the Richmond Times-Dispatch.

"We're not interested in attracting people to cigarettes," Gifford says. "What we know is about half of adult smokers are interested in an alternative, some way to safely enjoy tobacco."

Public health advocates are skeptical. Many doubt Altria and other tobacco firms' promises that they want to make products that reduce the harm tobacco use causes. Some believe cigarette makers really want to increase the number of people addicted to the nicotine in tobacco.

"I think it is greenwashing," said Chris Bostic, policy director of Action on Smoking and Health. "If they really wanted harm reduction, they'd stop making combustibles."

While the master settlement pushed cigarette prices higher, encouraging some smokers to quit, he said cigarette makers just turned to more effective marketing efforts, via social media. That also lowered the profile of a controversial industry to the wider world of those who do not smoke, easing public pressure on the companies.

Virginians, including high school students, are more inclined to use tobacco than other Americans, according to the [Campaign for Tobacco Free Kids](). It says 12.4% of adult

Virginians smoke, compared with the national average of 11.5%. It reports that 2.8% of Virginia high school students smoke, and 11,100 minors a year try cigarettes.

Health care costs in Virginia for smoking-related diseases total $3.6 billion annually, the campaign said. The $11.9 million Virginia spent on tobacco use prevention efforts was just 13% of what the Centers for Disease Control and Prevention recommends.

The shift in focus started with the Tobacco Master Settlement, 25 years old next month, under which Altria and other cigarette makers pay billions of dollars a year to states. Formally, the idea was to reimburse states for Medicaid programs' expenses in caring for smokers. In addition, the settlement forced up the price of a pack to levels that discouraged many smokers — and pulled back on ads and marketing efforts.

"The master settlement, it was really about saying to society we are going to reduce underage smoking, but with it we saw that the adult smoker was interested in alternatives. ... We've been at this for a while," Gifford said.

Inside a changing tobacco world

The tobacco world is changing. Thompson is one face of that.

He isn't a farm kid. And he started raising tobacco only 11 years ago — some seven years after many older growers in Virginia, as in other tobacco states, took the U.S. Department of Agriculture buyout of their quotas, a price support mechanism that in many cases their fathers, grandfathers and great-grandfathers acquired back in the 1930s, and stopped growing tobacco.

Ending the quota ended the government-sponsored safety net: the Flue Cured Tobacco Stabilization Corp. It would buy tobacco at a price that aimed to cover growers' costs and the work they put in their crop if they could not get that at the warehouse auctions that were how leaf was sold.

Ending the quota also ended the USDA's tobacco grading service — the impartial judges who could look at a 300-pound pile of leaf and set standardized ratings detailing stalk position — lugs, cutters, leaf of tips — color and body — the feel of a cured leaf that gave a good indication of sugar and nicotine content.

These days, Thompson and other growers negotiate contracts directly with buyers.

That usually happens around the time in February that Thompson and his helpers will be bent over ice cube-like trays of potting soil, carefully setting tiny pink tobacco seeds. It's finicky work. A line of 15 seeds will barely reach 1/8th of an inch.

Labor is 65% of a typical grower's cost

The contracts specify the pounds the grower is to deliver, and detail varieties to raise, and the stalk position — lugs, cutters, leaf or tips — the buyer wants.

"But when it's time to deliver, it's up to the buyer to say; he may say the color's not good, he doesn't like the body, the sugar or nicotine aren't right," Thompson said. "He may say he won't take it; he may offer you a reduced price."

Buyers all have somewhat different preferences — and their preferences can evolve as they and their colleagues in other areas start bringing in tobacco.

There's always a chance that bales that do not please one buyer a grower contracts with will be just the thing another is looking for. That's why Thompson, for instance, opted to arrange contracts with six different buyers this year.

Some years, he gambled on raising more tobacco than he had contracts for, betting that the harvest in other tobacco-growing areas might fall short — a hurricane hitting tobacco farms in the Carolinas in the big growing regions east of Interstate 95 could send buyers scrambling for leaf.

But that's a big gamble, given a cost of about $5,000 an acre to raise tobacco on the Old Belt.

There's special fertilizer, the cost of running his cultivar with its spiders — think rimless spoked wheels — to pull and cover weeds, and above all the wages growers pay people to pull leaf.

Labor is 65% of a typical grower's cost.

For the most part, those wages go to seasonal workers admitted for temporary stays with an H2A visa, with minimum wages dictated by the U.S. Department of Labor. This year, for people working in Virginia fields, they rose by just over 5% to $14.91; over the past five years, they have increased by nearly 22%.

Thompson opts for people to pick his leaf instead of the mechanical harvesters some growers use.

"You need people to say if a leaf is ripe or not," he said. "You get a lot cleaner bale, too — no weeds or trash — and buyers want clean."

Growers can likely gross about $5,500 an acre from tobacco. As a margin over costs, it's not way out of line with soybeans raised on Old Belt soil — but beans might gross a farmer $500.

Farms in Southside Virginia simply are not big enough for that kind of gross income per acre to yield enough money for anyone to be a full-time farmer.

Shrinking

As the number of Virginia growers and the acreage planted fell in the 25 years after the master settlement, the value of what they sold fell to $107.6 million from $187.4 million — but the average gross for the small number of growers who kept raising tobacco rose to $352,000 from just under $32,000. Margins are squeezed, though.

Under the settlement, from 1998 to 2022 cigarette makers had paid $159 billion and those payments are to continue as long as the companies sell tobacco products.

States were free to use the funds as they chose, though the settlement urged them to step up spending on tobacco control and prevention programs. Last year, states used about 11% of the $6.38 billion of settlement payments they received for prevention and control efforts.

Virginia has so far received more than $3 billion.

It used the promise of future payments to issue bonds, and invested the proceeds.

Half of the income from those investments funds the state's Tobacco Region Revitalization Commission's efforts to ease the impact of falling tobacco sales on farmers and the towns that long depended on tobacco growers' income.

The commission paid growers some $479 million to compensate them for losses they suffered as the U.S. Department of Agriculture cut tobacco quotas — the limits on the amount of tobacco they could sell — before USDA ended the program altogether by buying back quotas for $7 a pound (with $3 more for growers who held quotas).

Many producers used the money to pay off debt and keep their farms running while they shifted to other crops — but the big notion that they could grow vegetables never really panned out.

The processing, distribution and marketing systems that are needed to attract interest from supermarket chains did not come.

On top of that, soils in the Old Belt are not the most fertile. That's good for tobacco, because it forces the plant to ripen quickly once its white or lavender-colored flowers are pulled off — "topped" as growers say. Other crops do not do as well.

Fewer cigarettes

Growing tobacco is shrinking. So is smoking.

The fraction of American adults who smoke cigarettes fell to 12.5% as of 2021, according to the Centers for Disease Control and Prevention. An additional 3.7% used e-cigarettes, 2.3% used smokeless tobacco — dip, snuff or snus — and 3.5% smoked cigars.

Just 2% of high school students smoked cigarettes. In 1997, 37.7% of high school boys and 34.7% of girls smoked cigarettes — more than double those numbers had tried it at some point, CDC reports show.

But vaping is popular: 14.1% of high school students use e-cigarettes — devices that often use synthetic nicotine rather than the tobacco-derived compound.

The year before the settlement, American tobacco companies sold 478.6 billion cigarettes, down sharply from the 1981 peak of 636.5 billion. But by 2020, the latest year for which data is available, sales had dropped to 203.7 billion, the Federal Trade Commission reported.

The way the companies market cigarettes changed dramatically, too. Promotional allowances — basically, price discounts, already the biggest marketing expense in 1997, the year before the settlement, at $2.44 billion — have climbed to $7.47 billion.

Meanwhile, the public presence of cigarettes almost disappeared.

The companies stopped spending on sponsorships, endorsements, entertainment events, sampling and advertising in newspapers, while magazine advertising fell to $4.3 million from $237 million; billboards to $1.8 million from $295.3 million. Spending on point-of-sale store displays fell from $552.6 million to $47.1 million.

Members of the 1,600-strong field sales force at Henrico-based tobacco giant Altria, manufacturer of the nation's No. 1 cigarette brand, Marlboro, regularly visit stores with ideas for selling cigarettes. They have also convinced 197,000 retailers to sign contracts requiring them to post "We Card" signs. The signs warn buyers they may have to prove they are over 21 if they want to buy cigarettes, e-cigarettes, cigars or oral tobacco.

Altria signed up more than 137,000 stores for a scanner and software system based on an electronic scan of a consumer's government-issued identification, such as a driver's license, to purchase any tobacco product.

When a salesclerk scans a tobacco product for a sale, the system requires a scan of a driver's license or similar ID before the transaction can continue. The scanner includes software that can confirm that the ID has not expired and that buyer is over 21.

Making cigarettes — and other items

At Altria's Richmond Manufacturing Center, its 1,700 employees run the machines that make 75 billion Marlboro cigarettes a year, and they also produce more than 90% of one of the new products — “on!,” pouches with tobacco-derived nicotine and plant fiber, said Scott Myers, president and CEO of Altria Group Sales and Distribution Co.

A pilot line at the plant is making parts for another smoke-free product Altria is developing: a handheld device, called “SWIC,” that looks much like a vaping device, but that will heat a capsule of tobacco, inside of a liquid with either tobacco-derived or artificial nicotine, the addictive ingredient in tobacco plants. Those capsules are what the Richmond pilot line is making.

SWIC is meant to appeal to tobacco users who want to inhale a stronger tobacco flavor than vaping liquids now deliver, but that does not look like a cigarette, which Altria thinks will appeal to smokers who might feel embarrassed when others see them smoking, or who worry others will be offended by that stale smell of smoke.

Compared with cigarettes, SWIC prototypes are delivering low levels of the 93 chemicals that cause cancer or lung disease, the company says.

Altria scientists, engineers and marketers are still working on last-minute refinements to the device, “but I think we’re really close to delivering a final product,” Altria chief operating officer Jody Begley has said.

Altria, meanwhile, expects to file with the Food and Drug Administration in 2025 for preliminary permission to market a Richmond-made, Marlboro-based stick to be used with a heating device that Japan Tobacco has developed. The two tobacco giants have formed a joint venture to market a system comprising pint-sized cigarettes that fit into a handheld heating device.

The idea here is to have a product that offers smokers some of the sensory signals that cigarettes do — the tapping of a cigarette on the pack, for instance, that for many is the preliminary to that first deep drag that the heated sticks also provide. Because the stick is heated, rather than burned, it does not create some of the chemicals and toxic carbon monoxide that cigarette smoke contains, Altria says.

By pairing Japan Tobacco’s device, already for sale in its market, with Marlboro-brand sticks, Begley says it should appeal to smokers who might be hesitant about trying something new.

Flue-cured leaf

Heated sticks mean opportunity for Old Belt growers, because they would need the same high-quality flue-cured or bright tobacco grown along the Virginia-North Carolina line — and maybe even proportionally more, said Stephen Barts, a Virginia Cooperative Extension agent specializing in tobacco.

Combustible cigarettes often use blends that include lower-quality leaf because Old Belt flue-cured tobacco can mask the taste of that leaf, whether imported from Brazil, Zimbabwe, Zambia or Malawi or from growers farther south on the lighter soils of coastal plain North and South Carolina, Georgia and Florida, Barts said.

But heated tobacco sticks are smaller than cigarettes and use less tobacco overall.

Bright tobacco makes up about three-quarters of the leaf in an American-style cigarette and all of the leaf in British or Canadian-style brands.

American-style cigarettes also use burley tobacco, a variety still grown in Southwest Virginia but mainly in Kentucky, and oriental style leaf, which is usually imported from Turkey or the Balkans. Oral tobacco and the advanced products, such as pouches, use a different kind of tobacco, like the dark air-cured and dark fire-cured leaf that is still grown in Charlotte County.

As fewer Americans smoke and with dark tobacco in demand for two of the main alternatives to cigarettes — oral tobacco and pouches — overseas buying of flue-cured tobacco — from China, notably — has become the mainstay of Old Belt growers, Barts said.

“We’re an export market,” he said. “There are more smokers in China than people in the United States.”

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$2.2 billion and counting: Dominion readies its grid for renewable energy

https://richmond.com/news/local/business/dominion-energy-renewable-youngkin-solar/article_7d874d18-ffe2-11ed-9d25-63c0e70a5dd6.html

Fifty feet above Buford Road, lineman Hunter Curtis grabbed a live wire on a 32,500-volt mainfeeder circuit and, with hand signals and a quiet word or two, directed crew mate Jameson Lane to gingerly move the roller he had locked onto the wire a little lower.

When Curtis tied that live wire to an insulator at the top of a new pole the crew had erected the day before, he took one more step on a multiyear, $2.2 billion-and-counting Dominion Energy “grid transportation plan” to redesign and reconfigure its 66,400-mile-long network of wires connecting more than 2 million customers to its power plants.

Virginia’s push for renewable energy — wind- and solar-generated electricity — along with the growth of electricity glutton data centers and the rise of electric vehicles will mean a fivefold increase in the rate at which electricity use has been growing and pose never-before-expected challenges to managing voltages on the grid.

“The grid was basically designed for one-way flows, from generator to substation to customers,” said Aaron Tickle, Dominion’s manager for grid resiliency.

“Now, we have to think about two-way flows: thousands of power plants, like solar panels on roofs, that come off and on without warning ... electric vehicles that will change demand profiles.”

Drivers need to charge EVs at not completely predictable times, though Dominion expects many will be plugged in overnight, “what used to be our slow time,” he said.

Fixing ‘voltage islands’ and ‘voltage optimization’

The grid modernization program started in 2019 after the General Assembly approved a controversial bill allowing Dominion to use some of the excess profits it had earned to finance the effort. So far, the company has spent $1.05 billion on the project; over the next three years, it expects to spend about $1.17 billion, according to a filing at the State Corporation Commission.

Tickle is responsible for the grid project’s mainfeeder hardening work — the stronger poles and newer poles to be set up on 195 circuits that have seen at least twice as many outage minutes as average for the Dominion system. In some cases, as with a project on his to-do list in Farmville, it means relocating poles and wires — there, it will mean running a line that now crosses the Appomattox River after running through a stretch of swampy woods with a new set of poles and wires along a nearby road.

The pole Curtis and Lane would spend the day working on is one of hundreds along Buford Road to be replaced in order to make one of Dominion’s more outage-prone circuits, this one serving 3,560 customers, more reliable.

Those poles will stand 5 to 10 feet taller. They will be rooted in much deeper, 6 to 10 feet holes, and will have girths roughly 8 to 9 inches longer than the old poles. They will have lighter, fiberglass cross-arms — they’re gray-colored — which means if a cross-arm is hit by a falling branch or tree, it will be much less likely to bring down the whole pole. In many cases, poles are spaced closer together.

Tickle is also overseeing two other major pieces of grid modernization: fixing the handful of “voltage islands” on the system, and implementing new systems for regulating voltages — “voltage optimization” — that Dominion expects will yield a 1% savings in energy use.

All of it is complex, often finicky work.

On Buford Road, that day’s drizzle and the usual 7 a.m. rush to schedule the stepped-up electrical equipment triggers that make working on live electricity safer for some 180 crews working around the state, meant Curtis and Lane probably would not finish that pole that day. The last major act in what Mack Britt, the safety coordinator for contractor

Carolina Power said “is really a ballet,” would be setting and up wiring a new transformer to replace the blackened, rusty one on the old pole.

“Rain and 32,500 volts don’t mix,” said Andy Clary, the Dominion Energy supervisor overseeing the Carolina Power crew, keeping a careful eye on the overcast sky.

“When it gets damp, you can hear the wires start buzzing and VDOT won’t let us flag” because of the risk of accidents, he said.

Adding to the time squeeze, Curtis, Lane and the rest of their crew can only work on the narrow road as cars and trucks and school buses race by on a single lane, from 9 a.m. to 3 p.m.

When the drizzle finally stopped, Curtis and Lane spent most of an hour carefully wrapping rubber sheets on the seven different wires for the two circuits on the pole — three for each circuit plus a neutral wire they also linked to one of their bucket trucks to act as ground. They had to maneuver their buckets between wires spaced just 56 inches apart.

“They’ll duck, sure,” Britt said.

Dominion’s contractors are currently working on 44 mainfeeder hardening projects, running over about 261 miles and serving 102,323 customers. It plans to work on an additional 67, serving some 306,889 customers, from 2024 to 2026. In all this work will cost $508 million. It will continue after that, too.

Customers on those circuits account for about 12% of Dominion’s ratepayers but see 42% of the utility system’s outages. On average, Dominion customers see 132 minutes of power outages a year, while those on lines the company wants to harden see an average of 469 minutes.

In a filing with the SCC, Dominion said a pilot hardening program, on 11 lines running over 60 miles, reduced outages by an average of 50%.

During Winter Storm Frida on Jan. 3, 2022, one Goochland County line that had not been hardened sustained seven downed spans of wire between poles and 20 broken cross-arms. Repairs took the better part of two days to complete, and more than 900 customers were without power over that time. Another line feeding off the same substation that had been hardened did not suffer any outages.

The new “voltage optimization” approach that is also a big-ticket part of grid modernization aims for the same basic standard Dominion has long maintained: that the voltage reaching customers at the farther ends of those 66,400 miles of wire, aiming at 120 volts, actually stays within 114 to 126 volts for customers.

Voltage optimization is basically a system that gets almost real-time readings on voltages through smart meters on customers' homes and businesses and that can then automatically issue commands to the safety devices that regulate voltages on a circuit.

It supplants the modeling approaches Dominion's grid managers use as they monitor and control the system, moment by moment.

The optimization approach provides for more precise settings for voltage control — by applying engineering assumptions in the modeling approach, without that immediate read on actual voltages, grid managers build in a buffer to ensure there's always enough juice everywhere in the system. More precise controls mean the system can run on lower voltages while remaining within current prescribed standards and ranges.

Dominion wants to target a systemwide 2-volt reduction — roughly speaking, the amount of electricity needed to power a small, 1-inch diameter motor that might move a toy car, or to power the chips in two hearing aids.

The utility has got elements of the system installed at 145 premises and expects to add 2,315 more by the end of this year, at which point the control systems fed by the continuous stream of voltage readings from those modern meters will be operational.

It aims to add 28,000 more premises to its voltage optimization network over the next three years — work that will also mean adding or upgrading transformers at its substations and other work on its lines and voltage-regulating gear.

In all, this push will cost about $215 million.

'Think computer screens instead of dials'

Dominion also wants to tackle voltage islands.

These are substations with only one transformer: typically, a truck-sized gray box with pine-tree-like bushings linking it with the substation's overhead wiring. Transformers step down voltages to safe levels for the station's mainfeeder circuit. Backups exist in most of the Dominion system.

Now, there's such a backup second transformer at Dominion's Hanover Substation on Ashcake Road.

So far, Dominion has arranged the backups to eliminate three voltage islands and expects to complete that work for two more this year. It wants to eventually address six more over the next three years, at a cost of $25 million.

Such voltage islands expose customers to extended outages if a transformer fails, since it can take 24 hours to get one of the utility's mobile transformers onsite. It can take one to two years for an order for one of these complicated bits of electric equipment to arrive to replace a failed unit.

Failures are rare, but when they happen, lights are off for long spells. In August 2021, a transformer failure at its Glasgow substation in the Shenandoah Valley cut power to more than 2,000 customers for more than 19 hours.

For the next phase of its grid modernization efforts, it wants to address six more, including Glasgow. These serve 8,169 customers.

These efforts are far less costly than mainfeeder hardening: Dominion estimates the six projects will cost $25 million.

Grid modernization also includes tree trimming work next to lines. Dominion has removed more than 16,900 ash trees and trimmed trees along more than 22,300 miles of its wires.

The project also involves installing intelligent grid devices, which are sensors that can pinpoint faults on lines to speed repair crews or to automatically reroute power flows to keep customers' lights on.

The program will also involve installing more distribute energy resource devices — basically, the relays in substations that trip circuit breakers and switches but unlike older models operate much like the smart meters that are key to the voltage optimization work.

"Think computer screens instead of dials," as Tickle explained them.