

The Promotion of Vaping to American Youth

An STS Research Paper
presented to the faculty of the
School of Engineering and Applied Science
University of Virginia

By

Margaret Collins

March 27, 2025

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

Margaret Collins

STS Advisor: Peter Norton

Table of Contents

Sociotechnical Report - “The Promotion of Vaping to American Youth”

Capstone Report - “Ivy Solar Landfill Final Design”

Preface

To retain customers, manufacturers, technology companies and other businesses must earn their trust. Through marketing, tech companies can communicate how their products respond to customers' expectations. Customer engagement in market orientation plays can improve innovation performance. Consumers are more likely to trust a company when they perceive other product-users as aligned with their own values or needs.

My capstone group developed a design and community engagement plan for the installation of a 3MW solar power facility on the capped Ivy Landfill, in Albemarle County, Virginia. It will power 750 homes in the county. By transforming a closed landfill into a productive solar power generation facility, the project will contribute clean energy to the local grid, reduce reliance on fossil fuels, and give otherwise undevelopable land a second use. Where projects face local opposition, case studies have demonstrated the efficacy of brownfield sites because they prevent encroachment on agricultural lands or forests.

Over a tenth of American youth regularly use nicotine e-cigarettes, which harm brain development and are highly addictive. Despite recent bans, lax enforcement permits unauthorized disposable products, largely imported from China, to dominate the market and evade regulation. The vape industry has promoted vaping among American youth by exploiting regulatory loopholes, manipulating risk perception through misleading packaging and sweet flavors, embedding vaping in youth social culture, and capitalizing on developmental psychological vulnerabilities.