



# E-Bikes on College & University Campuses

ULSE and the League of American Bicyclists



# The State of E-Bikes on College Campuses

UL Standards & Engagement and the League of American Bicyclists recently conducted a study among Bicycle Friendly Universities<sup>SM</sup> — institutions of higher education recognized by LAB for promoting and providing a more bikeable campus for students, staff, and visitors. The results of this study reveal that although e-bikes are common fixtures on many BFU campuses, there are significant gaps in infrastructure and policy development and enforcement, coupled with concerns centered around road and battery safety.

Nearly 2 in 5 (39%) BFU campuses now report the daily presence of electric-assist bicycles, or e-bikes, signaling a potential shift in mobility preferences among campus-goers. However, this uptick in adoption has outpaced the development of necessary infrastructure, leaving institutions grappling with gaps in e-bike parking, charging facilities, and safety education. Compounding these challenges are safety risks, particularly those linked to lithium-ion (or rechargeable) battery incidents, and inconsistent policy enforcement. As campuses navigate this evolving landscape, the need for comprehensive policies, improved infrastructure, and proactive safety measures will become ever more urgent.

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### **BFU Campus Deep Dive**

### Fire Code Restrictions Necessitate Infrastructure Development

For two BFU campuses, Colorado State University and the University of Maryland, College Park, there is a tension between encouraging e-bike usage on campus while e-bikes are prohibited from being brought indoors due to local fire codes. While both campus administrations want to encourage e-bike use as a sustainable way to get around campus, e-bikes cannot be brought indoors due to fire risks - despite campuses having no established alternatives for indoor storage and charging. School administrators are actively seeking workable solutions to the pressing need for charging and storage infrastructure on campus.



Only 13% of BFU campuses have designated e-bike parking areas, and even fewer (11%) offer outdoor charging stations.

## **Current Adoption and Infrastructure**

E-bikes have become an increasingly common sight across college campuses, with 2 out of 5 (39%) BFU campuses reporting their regular presence in daily campus life, while another one-third (31%) say they see them weekly. Forty-two percent of campuses offer shared e-bike services on campus, signaling a demand for multi-modal transportation options. Though a third (31%) incorporate e-bike considerations into their general bicycle safety education materials, e-bike adoption is outpacing e-bike-specific infrastructure development on BFU campuses. While most provide basic cycling facilities – 80% have bike parking areas and 60% have on-road painted bike lanes — e-bike-specific amenities remain limited. Only 13% of BFU campuses have designated e-bike parking areas, and even fewer (11%) offer outdoor charging stations. This gap also extends to safety education, with only about 1 in 10 (12%) campuses providing specific training or resources focused on e-bikes.



### **BFU Campus Deep Dives**

Policy Development at Colorado State University

Colorado State University took a holistic approach to e-bike policy development, with coordination with key stakeholders and on-campus partners as a vital component to ensuring that the policies developed are feasible for all groups responsible for implementing them.

Additionally, a key part of the policy development process involved ensuring that e-bike policies align with local laws and regulations. For Colorado State, city policies dictate where e-bikes can be ridden, and local fire codes prevent e-bikes from being brought inside buildings.

### Charging Infrastructure at Colorado State University

The administration at Colorado State University identified several challenges to developing charging infrastructure including:

1	A lack of data to determine how to develop safe charging infrastructure
2	Strained electrical systems in older facilities, which limit capacity to charge devices
3	A lack of funding for the electrical grid to

support e-bike charging



### Safety Concerns and Incidents

The safety landscape surrounding e-bikes presents pressing challenges for campus administrators. More than two-thirds (68%) of BFU campuses reported concerns about road safety, particularly pedestriancyclist conflicts (54%), and more than half (52%) cited concerns about e-bike battery risks. These concerns mirror that of the general U.S. adult population; a separate ULSE survey of U.S. adults found that half of e-bike owners (53%) were unaware their device was powered by a lithium-ion battery, and only 39% were familiar with ways to reduce the risk of lithium-ion batteries overheating and going into thermal runaway - a state of uncontrollable heat that can result in fire or explosion.

The frequency of actual incidents on campuses remains noteworthy due to their potential severity, especially when riders, pedestrians, and campus structures are involved. One in four (25%) BFU campuses have documented road safety incidents, such as collisions between e-bikes and pedestrians, while just over 1 in 10 campuses (11%) have experienced batteryrelated incidents.

Nearly two-thirds (63%) of respondents believe riders are charging their e-bikes in residential buildings, while 41% suspect charging occurs in academic buildings, and 33% in administrative offices.

# **Policy Framework and Implementation**

The development of e-bike policies lacks the full attention and commitment of some BFU campuses. Although e-bikes are not necessarily the primary mode of transportation on campuses, their presence is steadily growing. Each year, more e-bikes are imported into the U.S., and as their popularity rises, they will increasingly appear on college and university campuses. This presents an opportunity for institutions to proactively develop and implement policies that keep pace with this evolving trend. However, as it stands, only 41% of BFU campuses have implemented e-bike policies, and the comprehensiveness of these policies varies significantly. Only a small fraction -9% - have developed truly comprehensive policies, while for onethird (32%) the scope of rules is limited. Nearly a guarter (24%) of institutions have neither established policies nor any plans to develop them.

Existing policies predominantly focus on practical aspects of e-bike use. Four in five (80%) policies address storage regulations, while 68% cover parking requirements. Charging regulations appear in 58% of existing policies. However, mandatory registration requirements remain surprisingly low, with only 13% of BFU campuses requiring e-bike registration, a figure comparable to traditional bicycle registration requirements (14%).

# Enforcement Challenges and Compliance

The research revealed that 42% of campus administrators issue citations or fines for e-bike speeding violations, while 29% do so for prohibited or uncertified models. These varied enforcement practices underscore opportunities for campuses to refine their e-bike policies.

Unauthorized charging, such as charging in prohibited areas like dormitories or academic buildings, has emerged as a particular challenge. Campus administrators report that this behavior appears to be driven primarily by convenience for users to charge in unsanctioned areas. coupled with insufficient campus infrastructure. Nearly two-thirds (63%) of respondents believe riders are charging their e-bikes in residential buildings, while 41% suspect charging occurs in academic buildings, and 33% in administrative offices. What's behind e-bike riders charging in unsafe locations? More than 8 in 10 (82%) respondents attribute unauthorized charging to users' desire for convenience, while 65% cite inadequate campus infrastructure as a contributing factor.

More than half (52%) of BFU campuses cited concerns about e-bike battery risks.

**BFU Campus Deep Dive** Campus Infrastructure and Unauthorized Charging

For two BFU campuses, Colorado State University, and the University of Maryland, College Park, unauthorized charging is necessitated not just by inadequate campus infrastructure, but a complete lack of charging infrastructure on campus. With no authorized charging areas available, e-bike riders have no other option than to charge e-bikes in unauthorized locations.



Nearly half (47%) of BFU institutions plan to enhance their e-bike policy education efforts, while 42% intend to update their storage regulations.

# **Future Directions and Institutional Response**

Looking ahead, BFU institutions are beginning to recognize the need for more comprehensive approaches to e-bike management. Nearly half (47%) plan to enhance their e-bike policy education efforts, while 42% intend to update their storage regulations. A similar proportion aims to revise charging regulations (41%). However, there appears to be a concerning lack of urgency in addressing these issues – 35% of BFU institutions consider developing or updating their e-bike policies and infrastructure a low priority, while only 9% view it as a high priority.

# Conclusion

The integration of e-bikes into campus communities represents both an opportunity and a challenge for academic institutions. While their adoption continues to rise, the gap between usage and supporting infrastructure, policies, and enforcement requires attention. Success in this area will require a balanced approach that promotes the benefits of e-bike transportation while ensuring the safety and satisfaction of all campus community members. The current state of affairs suggests that while progress is being made, significant work remains to create truly comprehensive, safe, and effective e-bike management systems on college and university campuses across the United States.

Since 2011, the League of American Bicyclists' Bicycle Friendly University program has worked with over 300 participating institutions to recognize and promote best practices at the campus level to create great places for bicycling. In 2024, the League introduced a series of new questions and answer options to the annual BFU application related to e-bike-specific policies, and infrastructure. As future new and renewing BFU applicants begin to report on their progress in these areas, the League will continue to identify and promote new best practices, and to work with partners such as ULSE to help campuses evaluate their current practices and find innovative solutions to these evolving challenges.



# Recommendations for Progress

Based on the results from the survey and in-depth interviews, in order to address these challenges effectively, institutions should consider implementing a comprehensive strategy that includes the following:

- Development or expansion of extensive e-bike charging infrastructure networks that balance convenience with safety considerations
- Creation of comprehensive safety training programs specifically tailored to e-bike users
- Implementation of clear, enforceable policies 3 that address the full spectrum of e-bike usage on campus
- Establishment of consistent enforcement mechanisms with appropriate resources and personnel
- Regular evaluation and updating of policies to 5 reflect evolving needs and technologies

# **Methodology**

The results are taken from three separate in-depth interviews and one survey, consisting of responses from BFUs, conducted November 20, 2024 through January 31, 2025. This project was conducted in partnership with the League of American Bicyclists to gain crucial insights into current best practices and policies of Bicycle Friendly University members as it relates to e-bikes on campuses.

Qualitative data was derived from three in-depth interviews (n=5) which were conducted in November and December of 2024 with administrators at three different schools participating in the League of American Bicyclists' BFU program: the University of Maryland, College Park; Colorado State University; and Hunter College CUNY. Schools were recommended for participation and contact information was provided by the League of American Bicyclists. All qualitative data was transcribed, uploaded into the MAXQDA software platform, and analyzed with a hybrid coding frame.

Quantitative results were taken from a survey conducted among current and pending Bicycle Friendly Universities across the U.S., of which 85 responded. The survey was administered online by Big Village Insights between January 17-31, 2025. Surveys were administered online by BV Insights. As a member of the Insights Association and ESOMAR (the European Society for Opinion and Marketing Research), BV Insights adheres to industry ethics and best practices, including maintaining the anonymity of respondents. Note: All numbers are percentages unless otherwise noted. Figures may not total 100% due to rounding.

<sup>1\*</sup>Two participants from University of Maryland, two participants from Colorado State University, and one participant from Hunter College CUNY

### **E-Bike Smart Cycling Resources**

The League of American Bicyclists' comprehensive Smart Cycling education program offers a variety of educational materials, resources, and training opportunities for bicyclists and motorists. Whether you ride an e-bike or a conventional bike, we have educational materials for you! The pocket-sized Smart Cycling Quick Guide booklet includes important information on e-bikes. The League's free online learning center includes a series of E-Bike Smart videos and online guizzes about e-bike safety, designed to help riders of all ages and experience levels learn best practices to more safely and responsibly ride an e-bike. Information includes battery safety, types of e-bikes, trail etiquette, riding with traffic, and much more. Visit bikeleague.org/ridesmart for more information.

Standards & Engagement

### **About ULSE**

UL Standards & Engagement is a nonprofit organization that translates safety science into action through standards development, partnerships, and advocacy. Since 1903, we have developed nearly 1.700 standards and guidance documents for products ranging from fire doors to autonomous vehicles. ULSE enables innovation and grows trust by convening experts and informing policymakers and regulators as we work toward a safer, more secure and sustainable future. Visit ULSE.org for more information.

### About the League of American Bicyclists

Since 1880, the League of American Bicyclists has been peoplepowered, with a goal to make bicycling safer and easier as a means of transportation and recreation. Today, the League continues to improve lives and strengthen communities through bicycling. We are more than 200,000 members and supporters strong with more than 1,000 state and local advocacy groups and bike clubs as well as thousands of businesses, universities, and communities together leading the movement to create a Bicycle Friendly America for everyone.





