



ASPIRE Annual Meeting & Technology Showcase

Logan, Utah – November 3 - 6, 2025



Utah State
University

Project 4-Pathways

4.4-Community College and Post-Secondary Electrified
Transportation System (ETS) pathways Credentialing



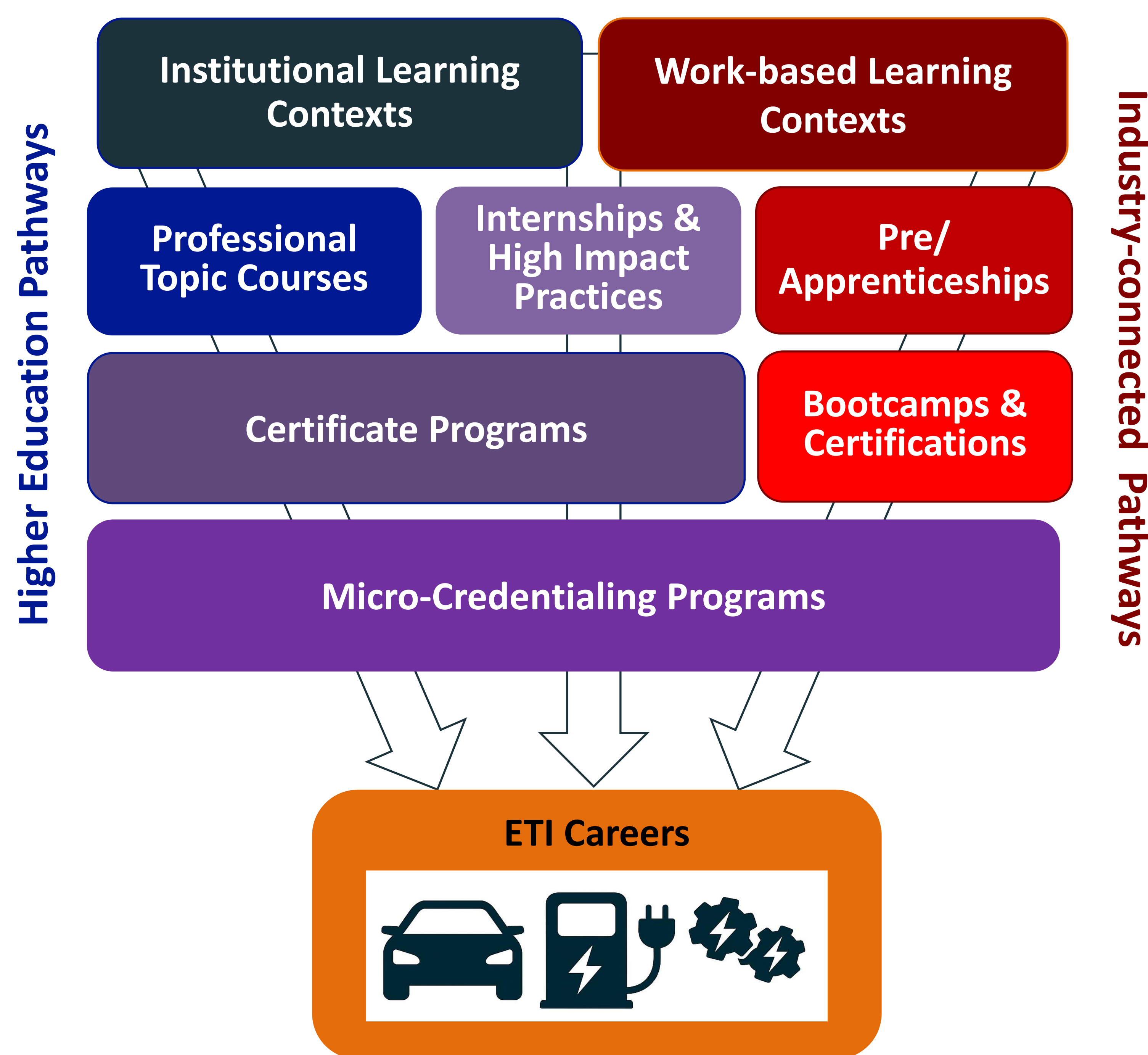
Preparing the Electrified Transportation Infrastructure (ETI) Workforce Sustainable Strategies through Non-Degree Credentials

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What are Non-degree Credentials?

The transition to **electrified transportation** demands a skilled, knowledgeable and adaptable workforce. **Non-degree credentials (NDCs)** are professional qualifications signaling mastery of specific career path skills or knowledge that may stand alone or complement an academic degree.



Currently Available ETI NDC Programs

Training Provider	Program name	Impact on ETI Competencies	Duration	Cost	Format	Credentials Awarded	Intended Audience
Legacy EV	EV Fundamentals Certification Bootcamp	High-voltage safety and gas-to-electric vehicle conversions	1-week virtual coursework and hands-on bootcamp	\$5,000	In-person	EV Fundamentals Certification Bootcamp	Anyone Interested in learning about EVs
Massachusetts Institute of Technology (MIT) Professional Education	Sustainable Infrastructure Systems: Planning and Operations	Planning and operating sustainable infrastructure systems (electrified transportation, sustainable practices and technologies)	8 weeks 8-10 hours a week	\$2,900	Online	Certificate of Completion	Executives, mid-to-senior level managers, policymakers, engineers and technical professionals, consultants, finance leaders and economists
IEEE Continuing and Professional Education	Transportation Electrification Course Program	24 self-paced courses focusing on transportation electrification and electric batteries	Self-Pace	\$240	Online	Continuing Education Units (CEU) and Professional Development Hours (PDHs)	Technical professionals in automotive industry, engineering students interested in automotive and battery technology
Weber State University Division of Online & Continuing Education	Automotive Technology Training Program	Phase I: High-Voltage Safety Phase II: Hybrid and Electric-Vehicle Systems & Phase III: Hybrid and Electric-Vehicle Boot Camp	Phase I: 7 -hour Phase II: 21-hour Phase III: One week of hands-on	\$375, \$735, \$2,000	Hybrid	ASE xEV and ASE L3 Light Duty Electric/Hybrid Vehicle Certifications	Anyone, EV owners, technicians, managers, high school and college auto shop teachers, factory training instructors, service engineers

NDC Programs
4-year Engineering Institutions
2-year Colleges



Workforce Interventions & Access



Workforce Readiness

Non-Degree
Credentials Obtained



Workplace Outcomes

Why Non-degree Credentials?



Flexibility & Responsiveness:
NDCs vs. Traditional Degrees

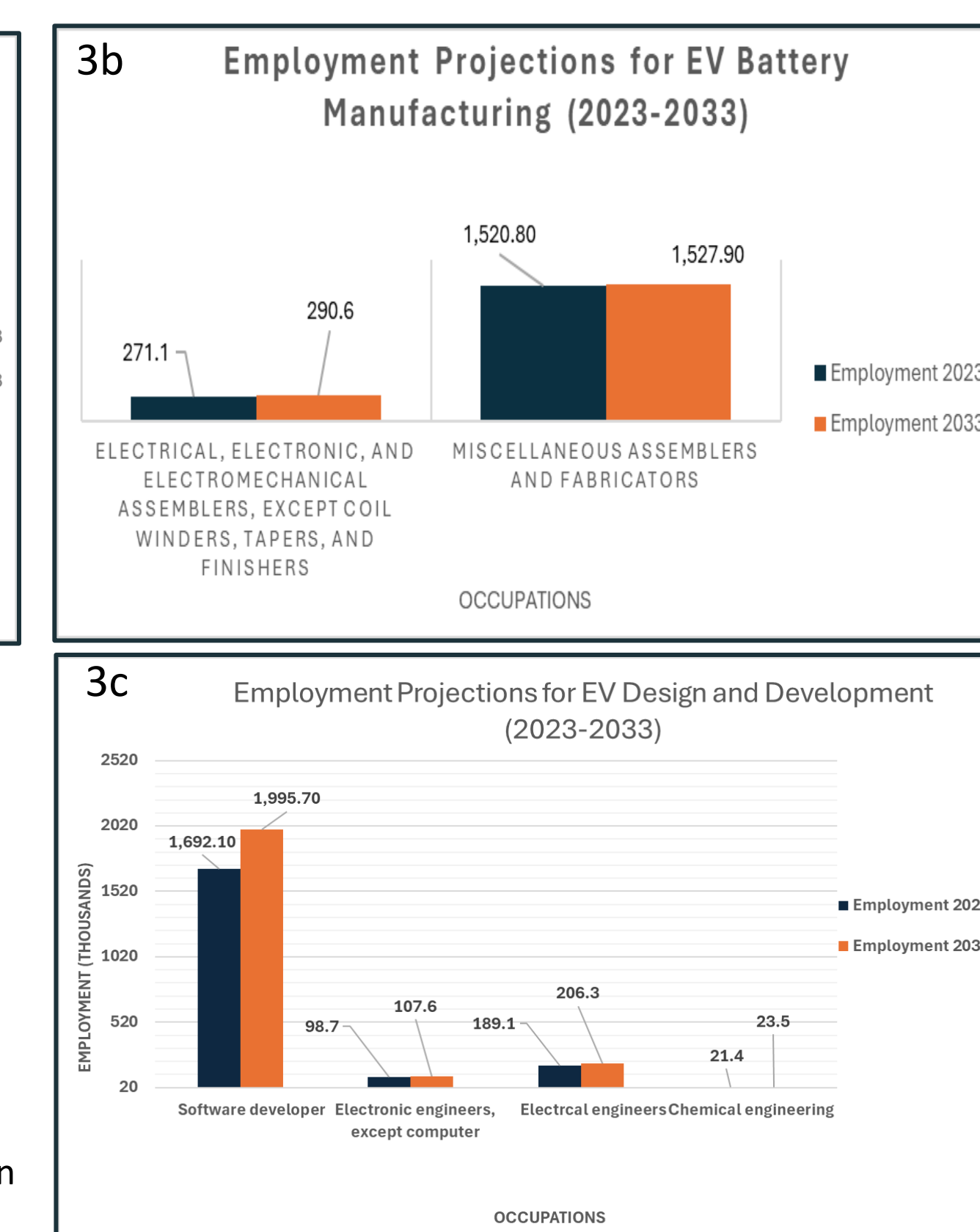
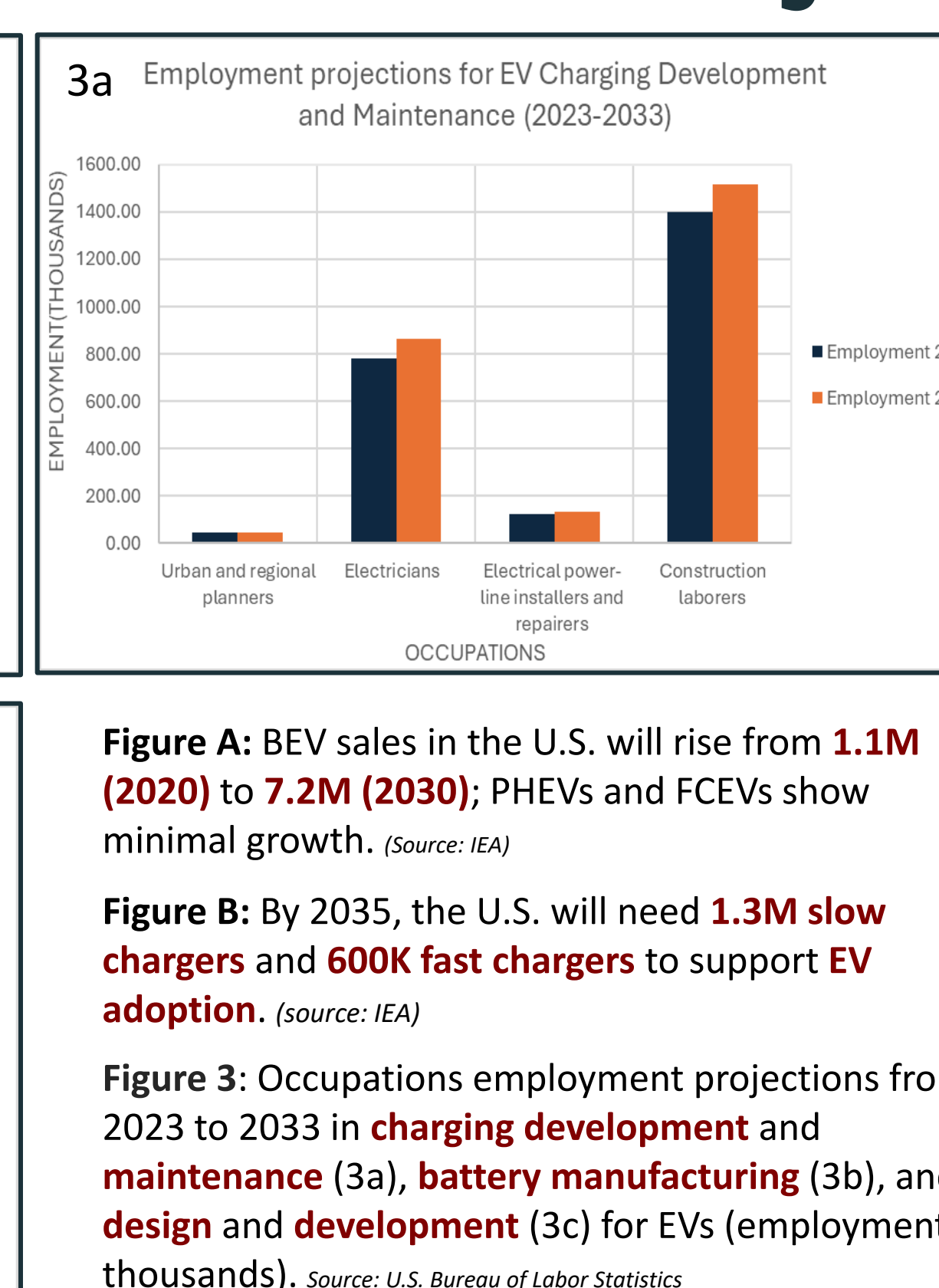
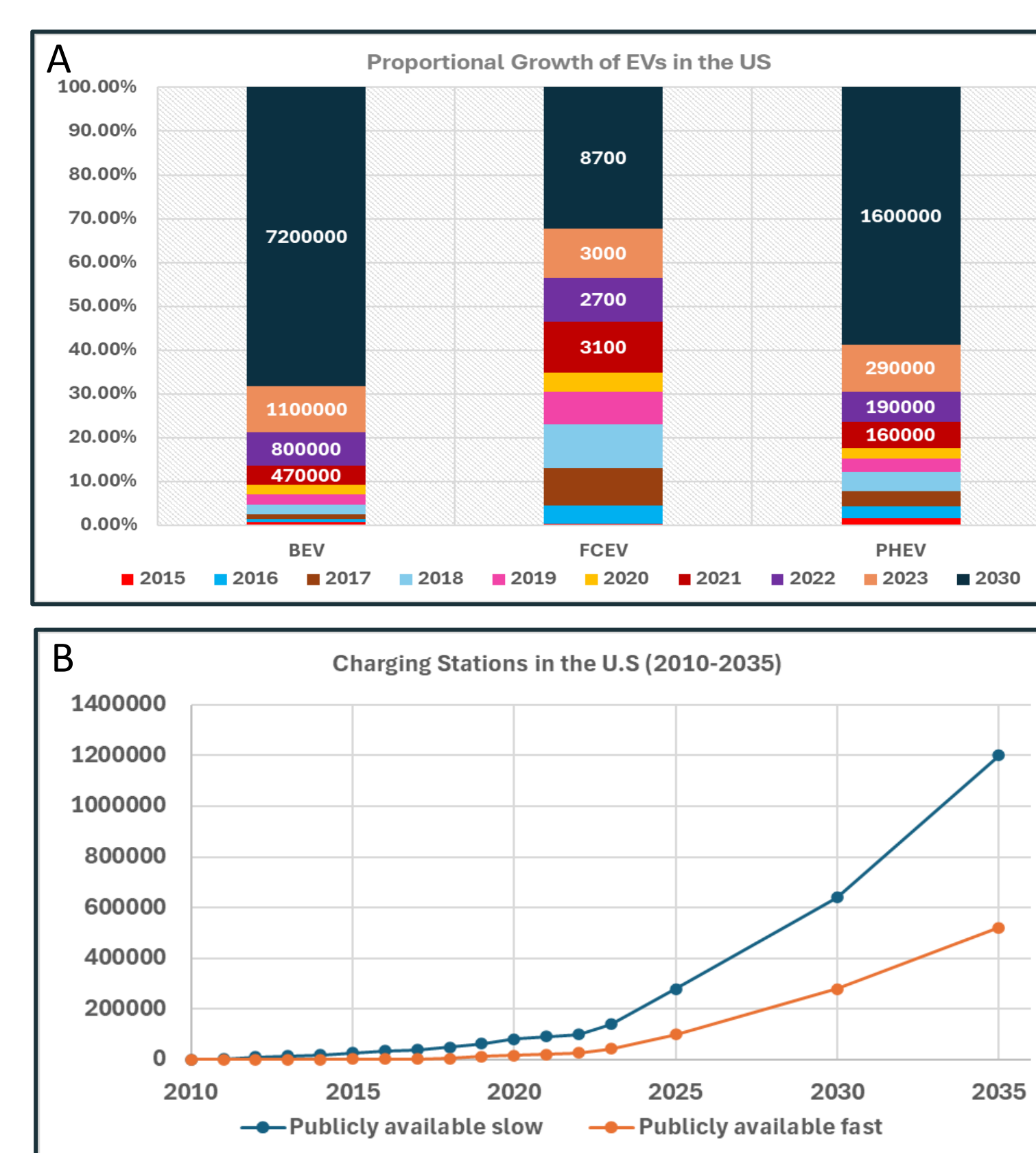


Benefits of Non-Degree Credentials

Feature	Non-Degree Credentials (NDCs)	Traditional Degree Programs
Customization	Tailored to industry needs	Standardized curriculum
Duration	Shorter timeframes	Multi-year commitment
Employer Responsiveness	Quickly address skill gaps	Slower to adapt
Learner Accessibility	Lower cost & time investment	Higher financial & time burden

Flexibility NDCs offer flexible learning schedules and formats, accommodating diverse learner needs
Industry Relevance Programs are closely aligned with current industry standards and demands
Career Advancement Learners can enhance their skills for career progression or transitioning into new roles
Cost-Effectiveness Typically, less expensive than pursuing a full degree, making education more accessible

ETI Workforce Projections



NDC Dissertation Research

- 1 Systematic Literature Review
- 2 Qualitative Interview Research ETI Industry Leaders
- 3 Case Study Research Pre-apprenticeship Program

Dissertation Research Objectives

- To systematically identify and synthesize existing empirical research about the role of NDCs in STEM workforce development
- To explore ETI industry perspectives about the implementation and value of non-degree credentials for workforce development
- To examine the practical impacts of an NDC (e.g., pre-apprenticeship) program on STEM workforce interventions, readiness, and access

References

Data are from the Occupational Employment and Wage Statistics (OEWS) program, U.S. Bureau of Labor Statistics: Source *U.S. Bureau of Labor Statistics*.
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International Energy Agency. (2024, April). *Global EV Outlook 2024 – Analysis*. IEA. <https://www.iea.org/reports/global-ev-outlook-2024>
National Electric Vehicle Infrastructure (NEVI) Formula Program (Building an EV Workforce_v3, n.d.)
Infrastructure Investment and Job Act (IIJA) (Christianson, 2023)