

## Practicum Proposal

Student name: [REDACTED]

*Partnering Organization (PO):* Policy Institute for Energy, Environment, and the Economy  
(3 Revolutions Future Mobility Program)

*Project supervisor*

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*Anticipated start and end date of the project:* July 1 - September 30, 2018

*Agreement for student compensation (if any) for services rendered to the PO:* GSR step 3

### **Project and partnering organization (PO) description**

1. *What is the mission of the PO in general?*

The mission of the Policy Institute for Energy, Environment, and the Economy <sup>1</sup> is to “leverage world-class university expertise and engage directly with decision-makers to deliver credible, relevant, and timely information and analysis to inform better energy and environmental policy.” The 3 Revolutions Future Mobility Program <sup>2</sup>, a segment of the Policy Institute, and the Institute of Transportation Studies, aims to understand the impacts of transportation revolutions - shared mobility, electrification and automated vehicles, “to guide industry investments and government decision-making.”

2. *What is the proposed project? What is/are the:*

*a. Motivation/need*

Automated vehicles are the future. They have the potential to improve the way we travel by reducing vehicle accidents, easing congestion, reducing parking needs, improving fuel economy, and providing mobility to people unable to drive. Without effective policies regulating the deployment of automated vehicles (AVs) however the consequences could be grim. Congestion could worsen, emissions could rise, and social inequalities could widen. Policymakers need to streamline regulation and provide incentives that push for electric and shared AVs, offer more

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<sup>1</sup><https://policyinstitute.ucdavis.edu/>

<sup>2</sup><https://3rev.ucdavis.edu/>

access and service at lower cost, and begin redesigning cities to encourage vehicle pooling, affordable living and more active travel.

Both the Policy Institute and 3 Revolutions Program focus on identifying transportation challenges, recommending policy actions for parties involved, and identifying opportunities for future research. I will be working as a graduate student researcher for the Policy Institute, for a total of 464 hours, to conduct transportation policy research and analysis for the 3 Revolutions Program and affiliate programs. Rather than being purely research-focused the position also involves collaborating with government agencies and industry, assisting with policy events and developing communication materials. Thus, it translates into what a policy research analyst at a government agency, non-profit or in the private sector may do.

*b. Question(s) to be answered*

Generally,

- Will the 3 Revolutions in vehicle sharing, electrification and automation improve or worsen transportation and quality of life in America?
- What benefits could occur if policymakers and business makers effectively manage the transition to maximize cost savings and environmental benefits?
- Alternatively, what could happen if government allows companies to rush gas powered autonomous vehicles to market?

Specifically,

- What challenges could AVs bring in terms of obsolete regulations, liability and insurance, software updates and authority conflicts between federal, state, regional and local governments?
- How can governments minimize regulatory patchworks while supporting AV policy innovation at all levels?
- What are some travel demand management (TDM) performance measurement metrics that Sacramento Area Council of Governments (SACOG) can implement to measure the effectiveness of various activities aimed at reducing single occupancy vehicle trips and miles?
- How can planners incorporate people-centric street design in a new transportation era?

*c. Objectives*

- Identify challenges and opportunities for future research
- Educate decision makers and the public on the importance of proactive AV governance
- Provide policy recommendations for decision makers to help prepare for emerging transportation technologies

*3. What analytical/methodological approach will be taken (i.e. how will the questions and/or objectives be addressed)?*

I will be sifting through literature to help write and edit white papers and policy briefs. Currently, I am contributing to a white paper titled 'Federal, State and Local Governance of

Automated Vehicles’, and to a policy brief titled ‘People-Centric Street Design in a New Transportation Era’.

I will also be collaborating with researchers at UC Davis to identify policy implications and write pieces that summarize recent research findings from The Sustainable Transportation Energy Pathways Program (STEP). Doing so requires that I understand complex research methods, analyses and results to make policy recommendations and convey key findings to decision-makers in the form of written briefs and guides. Additionally, I am working with a team on a research memo for Sacramento Area Council of Governments (SACOG) that identifies travel demand management (TDM) activities to reduce single occupancy vehicle trips and miles, and best practices for measuring performance effectiveness. In September I will be attending the Global Climate Action Summit in San Francisco with the team to represent the Policy Institute and present on 3 Revolutions Program findings. The Global Climate Action Summit brings together leaders from around the world that have acted to reduce emissions and are committed to further reductions.

4. *Name and describe the expected deliverables.*

<b>List of Expected Deliverables</b>
<p><b>Develop white papers and policy briefs</b> Research and analyze data for white papers and policy briefs relating to transportation topics. Help move policy briefs on AV governance and street design towards publication.</p>
<p><b>Complete TDM performance measurement research memo for SACOG</b> Research and analyze data for a research memo for SACOG on TDM performance measurement.</p>
<p><b>Write research summaries for STEPs Book</b> Complete a series of written research summaries for policymakers to be included in the next iteration of the Sustainable Transportation Energy Pathways (STEPS) book <sup>3</sup>. The book will “synthesize key insights from the STEPs program, inform decision makers in industry and government about the potential costs and benefits of different fuel and vehicle pathways and illuminate viable transition strategies towards a sustainable transportation future.”</p>
<p><b>Attend the Global Climate Action Summit (GCAS)</b> The Policy Institute and 3 Revolutions Program are hosting a series of information sessions at the GCAS and I will attend and support these events.</p>

<sup>3</sup><https://steps.ucdavis.edu/research/steps-book/>

5. *How does the project fit into the mission of the PO?*

The projects aim to provide credible, relevant and timely information and analysis about vehicle automation, electrification and sharing for decision makers. Condensed, easy-to-follow and straight-to-the-point briefs enable busy decision makers, some with non-technical backgrounds, to navigate key research findings that help guide policy.

6. *How will the project further your individual career objectives?*

The position will help further my individual career objectives by connecting me to transportation researchers, planners and policymakers striving to advance cities by making them more livable, equitable and sustainable. I am given the flexibility to explore transportation innovations and will integrate my coursework in urban planning and transportation policy and planning to come up with ideas for reducing vehicle miles traveled and consequent greenhouse gases. I will learn more about emerging transportation technologies and the discussions around them as well as incentives for electric vehicles and vehicle sharing. I will become more familiar with regulations pertaining to the transportation sector and with the different policy instruments being used and recommended. Finally, the position will advance my ability to communicate technical information to decision-makers in policy and management contexts.