



**Request for Proposals:  
Accelerating the transition to zero-emission vehicles in shared and autonomous fleets**

*January 2018*

***Background and project objectives***

This solicitation is to seek a partner to work with the International Zero-Emission Vehicle Alliance (ZEV Alliance) to explore ways to accelerate the transition to ZEVs through shared fleets. New mobility business models, including car-sharing, ride-sharing, ride-sourcing, shared ride-sourcing, and autonomous vehicles, offer exciting opportunities for dramatic environmental benefits when coupled with ZEV deployment. Very little research has been done to specifically show how such innovative projects around the world have worked to overcome unique ZEV issues (e.g., charging time, driver downtime, cost). The objective of this research project is to better understand and catalogue the foremost challenges and the leading practices to overcome barriers for shared ZEV projects. Beyond this, the unique value-add of this project is to analyze and offer recommendations to public policymakers to capitalize on opportunities to ultimately accelerate ZEV introduction. Potential recommendations could be related to smart parking, smart charging, new business models, and other policy concepts that better ensure shared vehicle fleets are ZEVs.

***About the International Zero-Emission Vehicle Alliance***

The ZEV Alliance is a collaboration of 14 governments, founded in late 2015 to accelerate the global transition to zero-emission vehicles. The member governments are four countries (Germany, Netherlands, Norway, United Kingdom) and 10 subnational jurisdictions (British Columbia, California, Connecticut, Maryland, Massachusetts, New York, Oregon, Québec, Rhode Island, Vermont). The collaboration includes the sharing of data, best practices, and lessons learned, and it involves coordinating on action plans to help the group collectively achieve its ZEV deployment goals. The Alliance selects three high-priority focus area topics per year for a deeper technical and policy exchange, and this project is an integral part of one of the focus areas. See these links for more information on the ZEV Alliance's [announcement](#) to move to all ZEV sales, [member commitment](#), [publications](#), and [events](#).

***Project elements***

The primary project elements are (1) engagement with the ZEV Alliance, (2) original research report as outlined below, and (3) a public webinar based on the results. The engagement with the ZEV Alliance includes monthly project management calls with the ZEV Alliance secretariat (ICCT), an initial teleconference call with interested ZEV Alliance members to discuss the approach and priorities, a preliminary result briefing, and incorporating secretariat and ZEV Alliance member input on the consultant's draft report.

The following provides the expected report outline and scope:

- **Background (3-4 pages)**
  - Review of shared mobility business models including ZEVs (FCEV, BEV, PHEV) and broader context with deployment of non-ZEVs in shared fleets.
    - Summary of all publically announced ZEV deployments in car-sharing, ridesharing, ride-sourcing, shared ride-sourcing, including in Canada, China, Europe, and U.S.
    - Review of autonomous vehicle developments, investments, announcements by automakers and tech companies, including summary of statements about whether they will be FCEV, BEV, PHEV or not.
  - Summarize shared, zero-emission, autonomous vehicle technologies, barriers
    - Shared (e.g., RFID, GPS, mobile app, consumer acceptance)
    - ZEV (e.g., cost, convenience, infrastructure, awareness)
    - Autonomous (e.g., sensors, software, cost, consumer acceptance, policy)
- **Review of environmental implications for low-carbon transportation (3-4 pages)**
  - Review and summarize the research literature regarding the environmental implications of each of the three individual promising trends (shared, ZEV, autonomous) as well as their combinations. This will include the handful of shared mobility options (i.e., carsharing, ridesharing, ridesourcing) as well as various levels of vehicle automation (i.e., low, conditional, and high automation).
  - Highlight other impacts, both positive and negative (e.g., safety, reduced vehicle ownership, traffic congestion, competing with low-carbon transit, vehicle activity increase, land use effects, equity and access, etc.)
- **Qualitative investigation of global ZEV deployment into shared fleets (4-6 pages)**
  - Through a series of interviews with cases where fleets have begun to electrify (for example with Energy Savings Trust in the UK, electric carsharing and taxi programs), summarize user/ridership, logistics, operations, feasibility, challenges, lessons learned, and key policies that have supported program success
  - Highlight positive opportunities and unique difficulties for electrification
  - Identify actions that could be taken to support ZEV deployment in shared fleets, including considerations for successful public-private partnerships where relevant
- **Quantitative analysis of select shared mobility use cases: ZEV practicality (e.g., charging, range) and the business case for electrification (8-10 pages)**
  - Identify representative transportation network company and carshare user profiles, assessing opportunities for electrification. Examples of the types of data to collect and analyze to the extent available include –
    - Trip time and distance, typical daily vehicle miles traveled, parking/dwell time, vehicle utility, etc.
    - ZEV range and refueling needs for each use case
    - Total cost of ownership assessment, value proposition of electrification
  - Collect information from ZEV Alliance members for relevant programs (e.g., car2go in Amsterdam, Maven in California, Car2go and Communauto in Montreal)
- **Discussion of implications (2-3 pages)**
  - Policy opportunities to accelerate the transition to ZEVs in shared and autonomous fleets
  - Opportunities for investment, partnership, and action from private sector to accelerate the transition to ZEVs in shared and autonomous fleets

The consultant report is expected to be approximately 20-25 pages in length (excluding references). This length is suggested to provide a balance of clearly demonstrating the data and methodological rigor, while being readable for range of research and policy experts. The paper is expected to contain approximately 4 figures and 4-6 tables that help quantify and illustrate the key findings. The structure of the report would roughly follow the progression described above, in addition to an executive summary (2 pages). The consultant would share Excel files with the final data and underlying calculations and data assumptions related to the work, and any additional graphic files for the ZEV Alliance to create for the final report layout. A Powerpoint slide deck containing major conclusions and highlights from the research would also be created and used to brief the ZEV Alliance members. Finally, the consultant would host a webinar around the time of the publication of the report, including a short overview by the report authors, discussion among experts from ZEV Alliance jurisdictions, and questions from the general audience.

### **Project timeline and engagement steps**

This project timeline is set by the schedule in Table 1 below. The secretariat (International Council on Clean Transportation) aims to notify the chosen consultant by the end of February and sign a contract for this work with the consultant by mid March. There are several critical dates related to this project. A March 13 ZEV Alliance meeting will serve as an introductory meeting for the consultant and the ZEV Alliance members to discuss priorities, approaches, and related activities in the ZEV Alliance markets. The work would primarily be done from March through September, with a preliminary draft report to the secretariat by July 31st and a draft final report to the ZEV Alliance members by September 28th. The secretariat will serve as the project manager to help coordinate the consultant and meet ZEV Alliance member expectations throughout the project. This includes assisting in meeting preparation and collecting and managing ZEV Alliance member input. The engagement also includes short monthly project management check-in calls with the consultant and secretariat from March through November. Following the draft report submission to the ZEV Alliance members by September 28th, the members will have two weeks to review the draft. The consultant would provide a briefing on the results during the October 9th teleconference with ZEV Alliance members, then incorporate feedback from the secretariat and ZEV Alliance members received by October 12th. The consultant would incorporate input, with support by the secretariat, by November 2nd, at which point the report would be submitted for final publication and design layout steps. The report is expected to be made publically available at the ZEV Alliance page (see [publications](#)).

**Table 1. Timeline for proposed 2018 ZEV Alliance project**

Project element	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Contract agreement signed			/									
Initial teleconference with ZEV Alliance			X									
Research, review, qualitative assessment							/					
Quantitative analysis, draft report									X			
Result presentation teleconference with ZEV Alliance										X		
Incorporate ZEV Alliance report input											X	
Publish report on ZEV Alliance website												X
Public webinar												X

X = major project milestone; / = interim milestone with the secretariat

## *Evaluation criteria for proposals*

Within the evaluation of the proposals, we expect the following six criteria will be included. We also note the expected length of proposal text to sufficiently explain the proposed work.

- (1) *Commitment to complete the scope of work*
  - The consultant would commit to comprehensively completing the expected report, engagement, and presentations. Simply copying the above “Project elements” text within the proposal is sufficient, including any additional supporting actions and their rationale for any of the above scope elements that are excluded.
  - Maximum 1.5 pages
- (2) *Commitment to the project timeline*
  - The consultant would commit to meeting the project timeline as specified above. Copying the “Project timeline” table and text above within the proposal is sufficient.
  - Describe the consultant’s internal process, the use of internal milestones contingency planning to quickly troubleshoot issues, updating and working with the secretariat, and any additional steps to ensure the project timeline is met.
  - Maximum 1.5 pages
- (3) *Prerequisite technical and policy experience*
  - The consultant provides evidence that they have the prerequisite technical and policy experience to complete the proposed work.
  - Share links to exactly four public reports authored by the consultant that are most directly related to this work, and summarize (with just 150 words each) how each of these public reports relates to this proposed project.
  - Maximum 1 page
- (4) *Staff management plan*
  - Name the individual staff (up to three key team members), their individual roles in completing the work elements above, and why they are well suited for the work.
  - Maximum 1 page. Up to 300 words for each person (bullets are fine).
  - Also please include curriculum vitae for the principal investigator who will be the primary contact and responsible for executing the project (max. 3 pages, separate document)
- (5) *Budget*
  - The maximum bid for the proposed work is \$50,000. Any bids exceeding this amount will be not be eligible. Additional points will be given for bids under the maximum. Include preferred payment timing to match the project timeline and milestones (100 words maximum).
- (6) *Additional value-add*
  - Please name any additional analysis, data, case study, or other research element the consultant can offer in the project to advance the overall project objectives.
  - Maximum 1 page

We provide clear guidelines above to emphasize the importance of succinct proposals. We view the ideal proposal to be clearly written and within **6 pages** (11- or 12-point font). Proposals over 8 pages will not be accepted. We also ask for two references that can personally attest to the consultant’s experience in successfully executing similar projects, ideally on a similar topic.

Please submit (1) the proposal in Word of 5-8 pages, (2) the principle investigator’s curriculum vitae of up to 3 pages, and (3) contact information for two professional references to [secretariat@zevalliance.org](mailto:secretariat@zevalliance.org) by no later than **February 19**. If potential bidders express initial interest in submitting a proposal by February 12, the secretariat will email any potential updates. The secretariat may answer or ask clarification questions but is not obligated to respond to inquiries.