USA Project update

EGEEC-58

China (Virtual)

March 29-April 1, 2022

Asia-Pacific
Economic Cooperation

APEC Workshop on Evaluation of Energy Technologies, Programs and Policies (EWG 12 2019A)

Edward Vine, Project Overseer
Lawrence Berkeley National Laboratory, USA

Objectives

- Bring together policy makers and evaluation practitioners to highlight evaluation methods and analysis, and the evaluation of energy technologies, programs and policies.
- Provide insights of the value of having robust evaluation practices through the presentation of best practice, case studies and workshop sessions.
- Step in developing a platform to discuss and exchange experiences, current strategies, policies, protocols, and regulations for designing and implementing program and policy evaluations.

Four 2-Hour Webinar Sessions Held in September 2021

Session 1	Purpose of evaluation – Sept. 14 – Tajbee Ahmed
Session 2	Evaluation design – Sept. 16 – Charles Michaelis
Session 3	Collecting data for effective evaluations – Sept. 21 – Jane Peters
Session 4	Strengthening the value of evaluation and evaluation capacity building – Sept. 23 – Ed Vine

Project Summary

- 20 workshop participants from 8 APEC member economies
  - China, Indonesia, Malaysia, Mexico, Peru, the Philippines, Thailand and Vietnam
  - 10 participants were women and ten were men
- Respondents to workshop survey all felt:
  - The workshop was relevant to the needs of their economy
  - They had gained new skills and knowledge from the workshop
  - Their specific skills and knowledge of evaluation of energy technologies, programs and policies had increased
  - They were all interested in continuing to develop their skills
  - APEC should consider continuing to support the development of an energy evaluation community in Asia Pacific
- Final APEC report (February 2022) is available at: https://www.apec.org/publications/2022/02/apec-workshop-on-evaluating-energy-technologies-programs-and-policies

NREL Transforming ENERGY

Asia-Pacific Economic Cooperation

APEC PROJECT: EWG 05 2019A *Sustainable Mobility: Routes for integrating the Energy and Transport Sectors for Urban Cities*

Project Overseer: Sanjini Nanayakkara

28th March 2022

Motivation and Project outputs

- "68% of the world's population is projected to live in urban areas by 2050", says the United Nations
- The rapid rise in economic growth and urbanization results in heavy traffic congestion in cities within APEC economies, thus requiring efficient and sustainable mobility solutions that is geared towards high-capacity, clean transport options.
- Our objective was to find integrated pathways for sustainable mobility – specifically finding key coordination points between the transport and energy sectors at the initial planning stages – that will enable greater deployment of clean transport options.

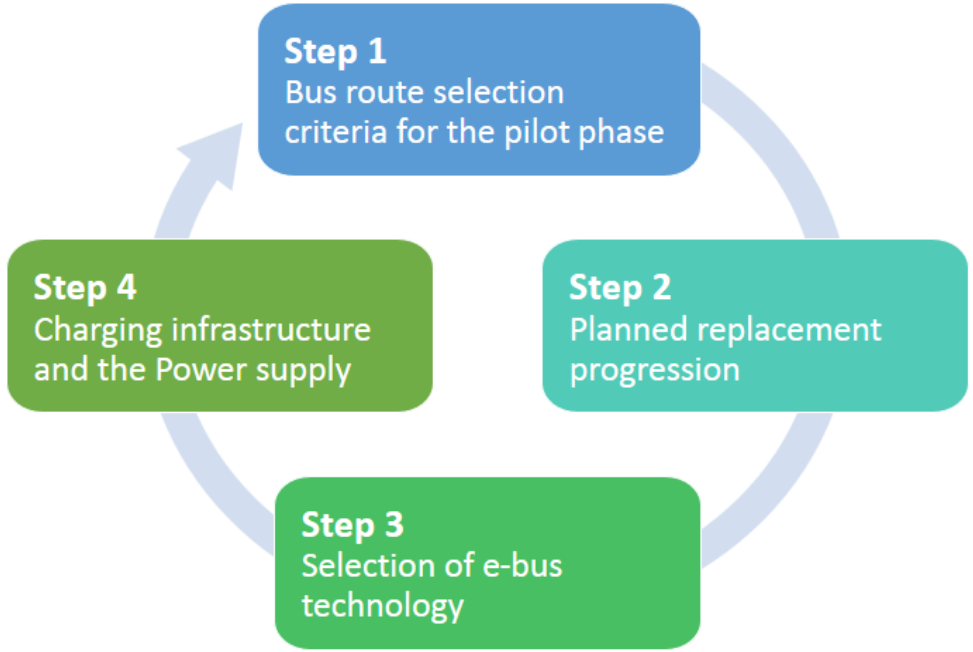
Project outputs (all tasks have been completed):

1) Case study – "Planning a transition to electrification of public transit systems – Learnings from the bus rapid system of Metrobus in Mexico City" (submitted to APEC for approval)
2) Webinar and panel discussion to disseminate the case study findings (Feb 2021)
3) Capacity building 'virtual' workshop (August 2021)
4) ***Project completed – awaiting final report approval***

Case Study: PLANNING A TRANSITION TO ELECTRIFICATION OF PUBLIC TRANSIT SYSTEMS: LEARNINGS FROM THE BUS RAPID TRANSIT SYSTEM OF METROBUS IN MEXICO CITY

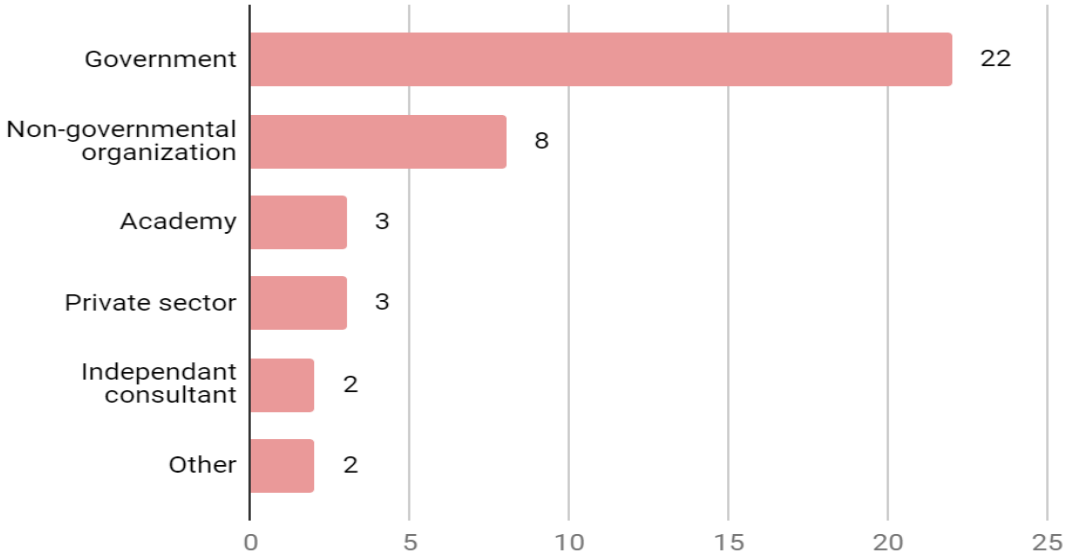
This case study highlights the strategies and actions that allowed the successful execution of this first stage in the replacement of traditional buses using ICEs.

The analysis emphasizes the methodology for choosing the technology and the necessary recharging infrastructure, including a discussion of the impacts of the replacement plan, such as cost savings and reduction of pollutant emissions.

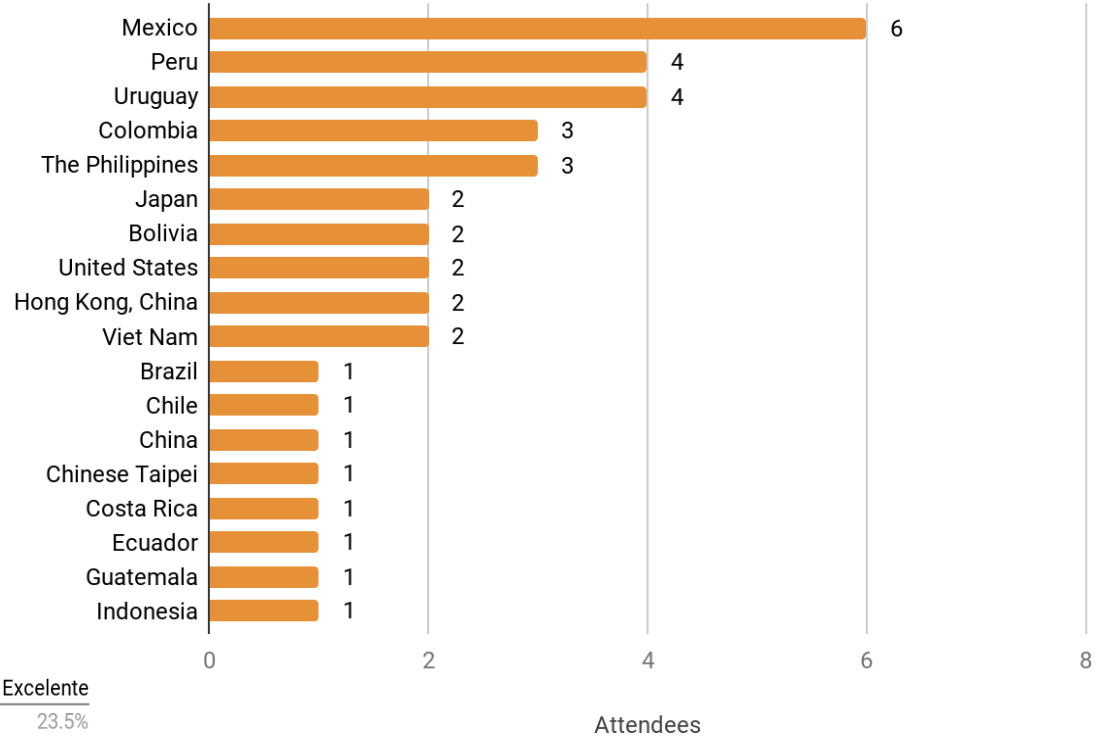


Steps for the development of the pilot phase project

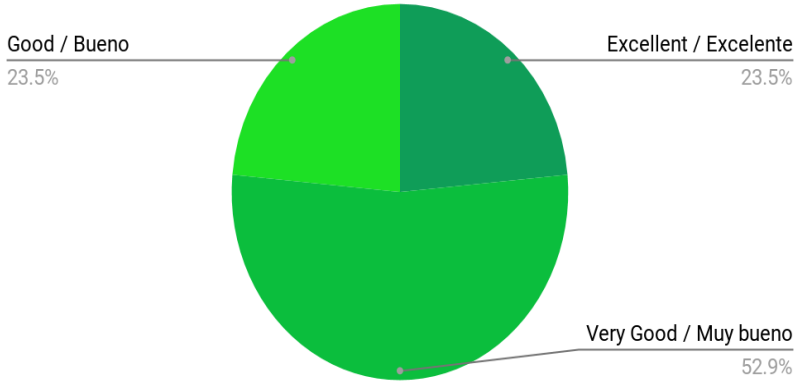
Webinar: The Learnings from the Planning of the Pilot Phase in Metrobus BRT, Mexico City



Participation by sector



Participation by economy



Webinar overall rating

Virtual Workshop: Key Messages
Integrated Sustainable Mobility for Urban Cities

Key messages

- Covid 19 recovery presents the opportunity to synergize the transport and energy sectors to decarbonize transport while creating jobs in the process.
- Equity and justice are key aspects to keep in focus in urban electrification projects: electrification should meet mobility needs that are not currently being met.
- The greatest planning and design complexity lies not in the vehicle technology or the charging infrastructure, but in the communication between the two.
- There is no single entity that should secure charging points. There are several business opportunities in this area to diversify the sources so that the infrastructure can properly support the users.
- The target of zero-emission is not enough, it must be integrated at every level of decision making and backed by renewable energy targets and support policies.
- Electricity distribution systems are essential for social welfare, there is a need for a new grid architecture and policies to make the management and coordination of new distribution technologies and modernization more effective. To minimize the impact of extreme events, building resilience into the infrastructure design is key.

APEC Workshop Furthering University Collaboration to Support Data Gathering and Analysis in Energy Efficiency, Renewable Energy, and Energy Resiliency (EWG 06 2021A)

Project Overseer: Katie Purvis Roberts, Scripts College

Project Objectives

1. Build the capacity of workshop participants by continuing to develop collaborations between the EWG, APERC, and University faculty in APEC economies.

2. Continue discussion of data gaps and needs in Energy Efficiency, Renewable Energy, and Energy Resiliency and develop policy recommendations for the EWG in these areas

3. Share examples of collaborative projects that began at the June 2021 online workshop by policymakers and Universities in APEC economies that address APEC energy efficiency, renewable energy, and energy resiliency goals.

    - Assessing Strategies for Reducing the Lighting Carbon Footprint in the Tropics

    - Impact of New Work Patterns and Lifestyles on Energy Use and Resiliency with the COVID-19 Pandemic

4. Identify other methods of analysis to be included in projects, such as economic analysis

5. Discuss potential ideas for new collaborative projects

Workshop Details

- In-person, 3-day workshop
  - Bangkok, Thailand
  - Tentatively August 2022
  - Site visit to King Mongkut's University of Technology Thonburi's (KMUTT) Bangkhuntien Eco-friendly Campus to observe renewable energy and green building examples in the tropics

- Potential participants
  - EWG Policymakers
  - Researchers from Institutes (i.e. APERC and APSEC)
  - Faculty from Universities in APEC Economies

New concept notes for 2022

Project Overseer: Sanjini Nanayakkara

Session 1

- Submitted concept note titled "***Routes for integrating the Energy and Transport Sectors for Sustainable Urban Mobility***" – currently under review
- Co-sponsoring economies: Australia; Chile; Chinese Taipei; Hong Kong, China; Viet Nam

- Project Summary: The rapid rise in economic growth and urbanization is resulting in near-gridlock traffic congestion in cities within APEC economies, thus requiring efficient and sustainable mobility solutions that are geared towards clean transport options. We propose to apply the findings from our recently finished APEC project, which focused on building capacities to better support goals to achieve sustainable mobility solutions in urban cities via the integration of the transport and energy sectors. This project will generate at least two Technical Assistances (TAs) to selected cities in Latin-american APEC economies to address policy/technical/planning barriers and solutions for the implementation of transport decarbonization projects. The learnings will be shared with other APEC economies via dissemination and through the LEDS Global Partnership events.
- Proposed project outputs

  Two (2) to three (3) APEC LAC Economies' cities/agencies that have received technical support in improving or advancing processes of planning and/or implementation of policies and/or strategies for transport low carbon development and its integration with the energy sector.

Session 2

- Submitted concept note titled "***Renewable energy phase-in and fossil fuel phase-out strategies for transport: Enhancing sustainability, affordability, and equitable mobility access***" – awaiting to submit in June 2022

- Project Summary: The objective of this project is to support APEC economies to accelerate progress toward commitments to phase down fossil fuel subsidies and use and to increase the use of renewable energy in the transport sector. This is to be achieved through three activities: (1) establishing common baselines on fossil fuel and renewable energy use and targets for transport (through APEC economy factsheets); (2) enhancing integration of transport and energy decision-making processes in APEC member economies (through implementation roadmaps); and increasing technical capacity to accelerate implementation of joint transport and renewable energy projects in APEC economies (through expert group meetings). Desired impacts include enhancing sustainability [of air quality/active transport] and increasing equitable transport access [for women and less-affluent populations].

- Proposed project outputs

  8 renewable phase-up, fossil fuel phase-down country factsheets
  2 roadmaps on RE/FF implementation for APEC economies
  2 expert group meetings on RE/FF (one virtual, one in-person)