

## **Comments from Howard Collash, Plug- In Jamaica**

Hello,

My name is Howard Collash, Co-founder of Plug In Jamaica. Below are my comments regarding the "Regulatory Framework to Facilitate the Penetration of Electric Vehicles in Jamaica"

### Question 1: Barriers to EV Ownership

(a) What are your views on the relevance of the identified barriers to EV ownership in our jurisdiction?

Answer: The upfront cost of new electric vehicle models is prohibitive for many Jamaican consumers. However, used electric vehicle models are within reach for many Jamaicans. As many of the first mass-produced electric vehicles entered the market in 2011, I would recommend removing the import age limit and reducing import duty to 10% for individual importers and 15% for dealer importers for electric vehicles. I recommend against removing the environmental levy on electric vehicles.

(b) Are there other relevant barriers not contemplated? If so, please provide details?

Answer: There is no indication regarding parts for electric vehicles. Example: EV battery pack, motor, and inverter. As the state of health (SOH) is an important factor for electric vehicle battery packs, the cost of importing a replacement battery pack will be seen as a barrier to EV ownership. Recommend that consideration be given to removing the import duty on EV parts for a period of 10 years.

(c) What measures would you suggest to surmount these barriers? Please see answers above.

### Question 2: Jamaica's Road Network

(a) What are your views on the appropriateness of Jamaica's Road Network to support the location of charging infrastructure for EVs?

Answer: I believe the current road network is appropriate for electric vehicles.

(b) What would you consider to be an appropriate distance between EV charging stations in Jamaica to mitigate range anxiety?

Answer: As the Nissan Leaf and Nissan E-NV200 will likely be the go-to electric vehicles for many consumers, having DC-fast chargers placed about 75 – 85 km apart on highly traversed routes should address range anxiety. Recommend between 3 to 6 DC-fast chargers at locations to.

(c) Should the Jamaican Motor Vehicle Registry be allowed to share EV registration and owners location with JPS? No.

### Question 3: Regulatory Approaches and Incentives

(a) Do you think that the GOJ and its agencies are doing enough to encourage the uptake of Evs? Please provide detailed reasons for your response.

Answer: No, I believe the GOJ and its agencies are dragging their feet on the issue.

Example 1: In 2018, Xavier Gordon of Xergy Energy did Electric Vehicle(EV) Technology impact presentation to OUR. A follow up electric vehicles evaluation could have been done.

Example 2: In early 2019 a drive-cycle analysis for JUTC was done by the National Renewable Energy Laboratory. Ministry of Transport have not move forward or acted on any finds in the study to move the JUTC fleet to 100% electric which could save JUTC on fuel and operational cost.

(b) What steps, in your view, are required to implement the proposed incentives/ approaches?

Answer: Approaches: 1. Ban that sale and import of new and used ICE vehicles into Jamaica by 2030

2. Mandate that all public and private passenger vehicles be BEV or FCEV

Incentives: 1. Remove the import age limit for electric vehicles.

2. Move the import duty from 30% to 0% for period of 10 years

(c) What are your views on the proposed approaches and incentives considerations to encourage EV take-up locally?

Answer: A step in the right direction. But slow adaption will keep Jamaica behind on the fight against climate change.

(d) Are there any other appropriate incentives and/or approaches not identified? Please provide details.

Answer: Recommend increasing the allowance to public sector workers to purchase electric vehicles only.

Recommend that all public school passenger vehicles be electric

(e) Do you share the view that GOJ should mandate EV targets for its own vehicle fleet?

Answer: Yes

(f) What difficulties do you think the GOJ will experience in implementing the proposed incentives or adopting the proposed approaches.

Answer: Lack of education regarding electric vehicles among the Jamaican population.

#### Question 4: Business Models for Infrastructure Ownership

(a) What policy options adopted in other mature EV markets would be appropriate for Jamaica?

Answer: Independent model would be best for Jamaica.

(b) What other challenges can you identify that may be unique to Jamaica and would require a different set of policy options or variations to other jurisdictions?

Answer: The Electric Act is the problem for Jamaica. The Act needs to be amended.

(c) What are your views on the appropriateness of the integrated and the independent business models for Jamaica?

Answer: The integrated model will be a problem in Jamaica as JPS as a negative stigma that will be passed on to any franchisees (or contractors).

The independent model will allow for 3<sup>rd</sup> parties to setup a charging network via off-grid renewable technologies that can charge \$JA 0.30 cents per Kwh.

(d) Are you of the view that both approaches are permissible in Jamaica? Please provide reasons for your answer.

Answer: No, JPS's monopoly of the energy generating sector is a problem.

#### Question 8: Benefits of EVs Uptake

(a) Do you think that more EVs in the system will significantly reduce the dependence on imported fuel? If yes, how? If no, why not?

Answer: Yes. As Jamaica moves towards more renewable energy technologies for power generation and adopt EV technologies within the transportation sector, this in turn will remove Jamaica from the oil market and protect Jamaica from external global market shocks.

(b) Do you agree that large scale EV adoption will significantly reduce greenhouse gas emissions in the environment? If yes, how? If no, why not?

Answer: Yes. Removing pollution emission will help to improve the air quality in densely populated area with in Jamaica.

(c) Do you agree that large scale EV adoption will have a positive impact on the economy? If yes, how? If no, why not?

Answer: Yes. By reducing the dependency of imported fossil fuel and using the natural resources for power generation and transportation sector will reduce the outflow of foreign exchange for Jamaica.

(d) The economic assessment carried out indicated that the pay-back period is more attractive for EV travelling a high number of miles. Do you think that EVs would be more economical for public passenger vehicles than private vehicles?

Answer Yes. For example have the JUTC fleet move to an all electric will same on the operational cost which in turn can be passed on the Jamaican consumer. Recommend using hydrogen fuel cell electric vehicles (HFEV) technology for longer routes and Battery electric vehicles (BEV) technologies for short routes

#### Question 10: Impact of EV charging on Electricity Supply

(a) What are your views on the effect of large-scale EV adoption on the electricity supply system?

Answer: I do not believe large-scale EV adoption will negatively impact electricity supply system.

(b) What do you think of charging of EVs at home and work place?

Answer: I think this is good idea. The average consumer daily commute is from home to work and back. If a place of business has an off grid systems then offering free charging at work should not be a problem.

(c) Do you think high adoption of EVs in Jamaica will reduce your electricity bill?

Answer: Yes. As there are many companies now offering off grid battery and solar systems, this in turn will lower my electricity bill and with the addition of an EV will also lower my transportation cost.

(d) Do you believe that the use of smart grid charging will allow for a greater penetration level of EVs when compared to uncontrolled charging? If yes, how? If no, why not?

Answer: Yes. If the incentive is there to charge an EV off peak then this will help greatly.

(e) What are your views on the effects of TOU billing on EV charging behaviour?

Answer: Residential customers can potentially save greatly with an EV and commercial customers may see even greater savings with EV fleets. Off grid customers would not get any benefits from TOU.

(f) What incentives should be offered for EV private home charging?

Answer: Lower rate for off peak charging.

(g) Do you think that a TOU tariff option would reduce the impact of charging load on the grid? What other do you think should be considered to smooth the demand spike that EV charging is expected to produce?

Answer: Support greater use of off-grid battery and PV systems. There would not be a great impact on the charging load on the grid.

(h) Should the Jamaican Motor Vehicle Registry be allowed to share EV registration and owners' locations with JPS?

Answer: No