



Sustainable Action Dialogue- Pre- event of WSDS in Monaco

'Advancing Electric Mobility in Cities: Addressing Critical Challenges' (Policies, regulations and technology)

Background Note

Transport accounts for 22-23% of world's energy related GHG emissions (IPCC, 2016).

Decarbonizing transport sector remains critical for climate mitigation. Oil powered transport has also been raising concerns regarding air pollution and energy security for countries.

The future is expected to be driven by clean mobility powered with abundantly available renewable energy. If powered by clean energy, electric vehicles (EVs) offer to be one of the most commercially viable clean mobility options for countries at the moment. Unsurprisingly, EVs are being adopted globally as a potential solution to curb emissions, air pollution and tacking concerns related energy security from the transport sector. While many cities have been successfully transitioning to the electric technology, for many other cities, adopting electric mobility has been challenging.

Norway is the world leader in terms of electric car market share, with more than 50% share of EVs (IEA, 2018). China on the other hand has the highest stock of EVs. As per IEA, 2018, China had the largest electric car stock, almost 40% of the global total. The Chinese market is predicted to record 2 million EV sales, across different vehicle segments, in 2019 (CleanTechnica, 2019). Countries at the forefront of EV adoption, typically adopt a wide ranging financial and non-financial measures like subsidies and tax exemptions on EVs, regulatory measures like priority parking for EVs, EV priority lanes, etc. China, has also been introducing infrastructure development programmes, technological innovation and EV mandate schemes like EV credit scheme. Similarly, Norway has been supporting setting up of charging stations and has been investing heavily in R&D on new technology, pilot

projects to understand the commercial viability and performance of new technology. On the other hand, in countries like India and Thailand, despite the presence of an electric mobility policy, EV growth has been sluggish. High upfront cost and severe lack of infrastructure have been the key constraints to the uptake of EVs, which many cities are struggling to overcome.

The global dialogue on electric mobility aims to promote an international discourse on identifying how cities can transition to electric mobility. This session brings together cities championing electric mobility with an aim to learn about the policy and regulatory instruments that have yielded results. The session will also have participants from countries/ cities with an ambition to transition to electric mobility but are struggling to develop a favourable ecosystem for the widespread adoption of this technology. The dialogue will also bring forth electric mobility technology providers and OEMs to develop an understanding of the technological challenges. Many countries are also pushing the EV agenda with the aspiration to become global EV manufacturers. The dialogue will explore how governments and technology providers could partner effectively in achieving the common goal of clean mobility.

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Key questions the session will address:

- What are the key barriers to electric vehicle adoption in different countries?
- What is the role of national, city level governments and the private sector in promoting EVs?
- What policy and regulatory frameworks have been most effective in ensuring uptake of electric vehicles in cities/ countries?
- What have been some of the effective models to fill the infrastructural gaps for EVs?
- What are the key technological challenges in developing affordable EV technology and how can these be bridged?