Sukhumi electric vehicle policy

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In 2023, global electric car sales reached nearly 14 million -- 18 percent of all new cars sold last year, the IEA estimates. For the global transportation sector to move from 18 percent to exponential adoption of zero-emission vehicles (ZEVs), supportive policy will need to be enacted worldwide, and supply-side policies are one component of this policy equation. These policies can enormously impact ZEV production and adoption, support energy security, improve air quality, and yield better health for local communities.

Supply-side policies can weather political transitions and have already played a key role in shaping the ZEV transition around the world. For example:

To assess the impact of supply-side policies on ZEV markets and understand their effectiveness and the challenges they face, RMI conducted a detailed, country- and policy-specific analysis. Although the ZEV supply chain includes upstream, midstream, and downstream components, this analysis focused on the downstream, specifically examining policies that support and impact ZEV manufacturers and suppliers.

Below we outline the role of ZEV supply-side policies, considerations for effective policies, global examples, and challenges these policies may encounter. Decision makers around the world can use these insights to craft policies to encourage and support domestic ZEV markets.

For further insights from this research see RMI"s Factbook: Zero-Emission Vehicle Policy -- how supply-side policies can impact zero-emission vehicle investment.

Supply-side policies (in the context of ZEV market development) encourage or require suppliers to produce increasingly more ZEVs over time. For this article, suppliers are defined as entities that manufacture and/or import ZEVs to increase the supply of vehicles in a specific market. The table below describes different types of supply-side policies.

Supply-side policies fall into two main categories -- regulatory and fiscal -- and each policy type has distinct challenges in terms of budget impact and political will. Additionally, regulatory and fiscal policies can have different impacts depending on the market"s maturity.

Supply-side policies are targeted policies that can be more cost-effective for governments to implement and provide greater certainty to market actors than demand-side policies, in turn driving increased innovation and investment. The advantages of supply-side policies are summarized in the table below.

Additionally, RMI"s research identified specific considerations for the development of successful supply-side policies and how they impact ZEV markets and work in larger policy ecosystems.

Identifying the market stage. When considering what policy mechanism to utilize, it is essential to identify what thresholds the market has reached; for example, is there sufficient product variety, has preliminary infrastructure been deployed, and is there cost competitiveness? Targeted subsidies can help overcome technology and operational risk to support transitions in their early stages. Sales requirements can be leveraged to support broader adoption in more developed markets. Consider the stage of the market and select the best policy type accordingly.

ZEV supply-side policies can vary in complexity. ZEV supply-side policies can be designed differently -- some are more complex than others. Fuel economy and fuel efficiency standards represent a more complex regulatory framework. These policies often require the standardization of testing protocols, differing requirements by vehicle type, and the establishment of certified testing centers, leading to a high administrative burden. Consider the complexity level necessary for the market context in which the policy is being implemented.

Varying intricacy of supply-side policies