

Electric Vehicles: Mobilizing Jordan’s Green Economy to Create a Transportation Revolution

From forward-thinking policy to innovative pilots, USAID develops a new industry—from the ground up.



With no petroleum production and an economy that is struggling with the consequences of regional conflict, Jordan has clear reasons to embrace green technology. With 330 days of sunshine per year, Jordan’s policymakers have long understood the value proposition of solar energy. From urban rooftops to hospitals and schools, photovoltaic panels are already powering individual residences and institutions throughout the capital of Amman and beyond. That kind of piecemeal reliance on sunshine, however, is not enough to revolutionize an entire economy. To do that, especially in a country short on public transportation, policymakers needed to find a new, greener way to keep its population mobile.

CREATING AN ENABLING BUSINESS ENVIRONMENT

To get there, JCP knew that it had to help pave the way for massive private-sector investment by drafting regulations that would create a more enabling business environment. In 2014, Jordan’s Energy and Minerals Regulatory Commission (EMRC) asked JCP to develop the regulations, taking into account international best practices and Jordan’s unique context. Released in May 2016 by EMRC, these regulations—the first of their kind for Jordan and the region—emerged from a critical moment in the program’s third year, when a JCP-organized one-day workshop brought together, for the first time, all of the key stakeholders in the new industry to reach consensus on concrete recommendations involving the EMRC, the Ministry of Environment, the Customs Directorate, the Drivers and Vehicle Licensing Department, as well as car dealers and technology providers. A highlight of the workshop was the participation of Chicago’s Manager of Fleet Services & Automotive Procurement, Kevin Campbell, who praised Jordan’s remarkable progress in building an electric vehicle industry.

The Journey to eMobility: How USAID Developed the EV Industry in Jordan

November 2014: First fully solar EV charging station inaugurated at the King Hussein Business Park during MENA ICT Forum.	November 2014: MoU signed between the AllCell Technologies Consortium, Ministry of Environment and the Greater Amman Municipality.	August 2015: JCP organizes workshop with key stakeholders on the “Future of eMobility and Electric Vehicles in Jordan,” producing key	September 2015: Cabinet exempts EVs from registration fees, and exempts charging devices from customs duties and sales tax.	May 2016: Cabinet approves the EMRC regulations on licensing EV charging stations and sets tariffs.
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A first of its kind. Barely a year after it was launched, the USAID Jordan Competitiveness Program (JCP) had already supported the Kingdom’s first-ever solar-enabled electric vehicle charging station, complete with state-of-the-art technology harnessing the sun’s zero-emission energy and storing it in batteries developed by a Jordanian diaspora-owned company. Pictured at left is the inauguration of the charging station at the King Hussein Business Park in Amman, featuring Amman Mayor Aqel Biltaji.

THE STORY

JCP’s work supporting the electric vehicle industry modeled a **“vertically integrated” approach to development**, removing obstacles at all levels of the economy. From drafting and helping pass the regulation needed to capture and sell solar-generated electricity at charging stations, to negotiating the partnerships that enabled private-sector investment in those stations, JCP has helped Jordan go **from a country with no electric vehicles to a market that now includes Tesla, Nissan, BMW, Mercedes, among others.**

THE BIG PICTURE

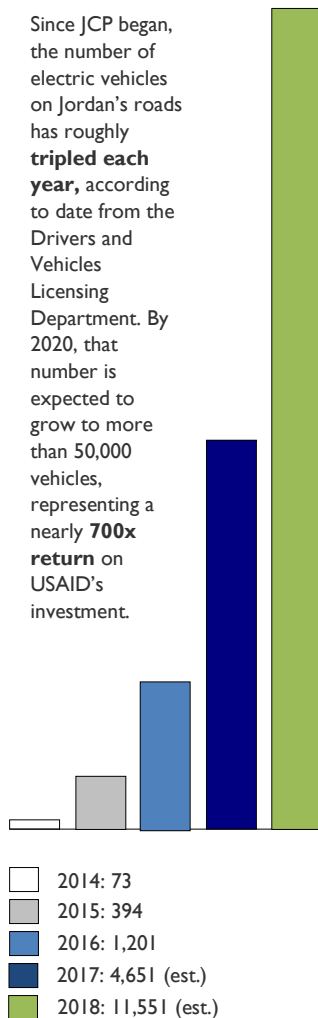
JCP’s work building the electric vehicle industry was part of its focus on **high-value knowledge economy sectors** like clean technology. By drafting regulations that allowed pooling of solar-generated electricity and then “wheeling” by retailers accessing the grid, the program helped create a competitive sector that has attracted some of the world’s biggest investors.

This Competitiveness Brief was produced by the USAID Jordan Competitiveness Program, implemented by DAI. www.dai.com

Thanks in part to the political capital it had accrued during this effort, JCP was able to facilitate the signing of a Memorandum of Understanding between the Ministry of Environment, Greater Amman Municipality, and the King Hussein Business Park, where the first electric vehicle charging station in Jordan was unveiled. A private-sector consortium led by Chicago-based AllCell Technologies soon agreed to develop Jordan's first pilot project—10 charging stations to support Amman's municipal fleet. And that was just the beginning.

Growth Trends

Since JCP began, the number of electric vehicles on Jordan's roads has roughly **tripled each year**, according to data from the Drivers and Vehicles Licensing Department. By 2020, that number is expected to grow to more than 50,000 vehicles, representing a nearly **700x return** on USAID's investment.



UNLOCKING THE MARKET'S POTENTIAL

The initial 10 charging stations, it turned out, were the grease in this new industry's wheels. Since they were announced, both BMW and Tesla have launched operation in Jordan, with the latter installing charging stations at several Manaseer petroleum retailers throughout the capital and its outskirts. What's more, both the public and private sectors have been scrambling to get in the game. The Jordanian government has purchased vehicles for its Ministerial officials, and the Amman municipality has already mobilized at least 100 zero-emission Nissan Leaf vehicles for its all-electric Tawseeleh taxi fleet.

All of this, of course, is creating a demonstration effect at the consumer level. Although auto retailers hold their sales figures close to their chests, anecdotal evidence suggests that showrooms are running low—and, in some cases, have even exhausted—their inventories of electric vehicles. And that's not all. Retailers that have typically sold a limited range of vehicles to the Jordanian market are rolling in their newer electric offerings to high demand. Take, for example, Renault. The French automaker's zero-emission Zoe was unheard of just three years ago, as JCP was launching its electric vehicle work. Today, the car can be seen throughout Amman.

USAID's pioneering work on Jordan's electric vehicle infrastructure has served as leverage for other early investors. In December 2015, for example, the French government partnered with the Greater Amman Municipality to fund 10 charging stations throughout the capital, an in-kind investment worth approximately \$500,000.

VALUE PROPOSITION

That wide-ranging popularity might ultimately be the most important driver of the electric vehicle industry's success. Proponents of the new industry point to the abundance of hybrid vehicles on the Kingdom's streets as an example of Jordanians' willingness to invest in economical alternatives to traditional transport. It's a value proposition that, policymakers hope, will allow the government to avoid long-term duty exemptions on the vehicles, bringing in much-needed revenue while allowing consumers to eliminate one of the most expensive costs in their monthly family budgets—automobile fuel and transportation.

SUSTAINING PROGRESS

For now, the government has maintained limited duty exemptions, including on electric vehicle batteries and their associated parts—a move made possible by JCP advocacy. Over the long run, these early incentives are expected to translate into more investment and thousands of new jobs. A 2016 JCP impact study estimated that, within the next decade, the industry will bring in some \$3 billion in investment—from charging stations, to new grid infrastructure, to the service sector needed to maintain the thousands of electric vehicles on Jordan's roads.

It took the JCP team three short years to take the electric vehicle industry from the drawing room to the showroom. With charging stations about to pop up at more locations, such as shopping malls, the incentives for consumers are clear. In fact, according to the *Jordan Times*, the cost of a 400-kilometer trip in an electric vehicle would be roughly one-third that of the same trip taken in a petroleum-operated car—or less.

Making good on the promise of an electric vehicle industry will take more than just sound policies and good-sense economics; it will take qualified professionals who can help translate these new regulations into practice. That is why JCP is working to build the technical and legal capacity of EMRC staff, who will oversee implementation of the new charging station licensing procedures. It's also why the program has partnered with the clean tech association EDAMA to train a new generation of green engineers.