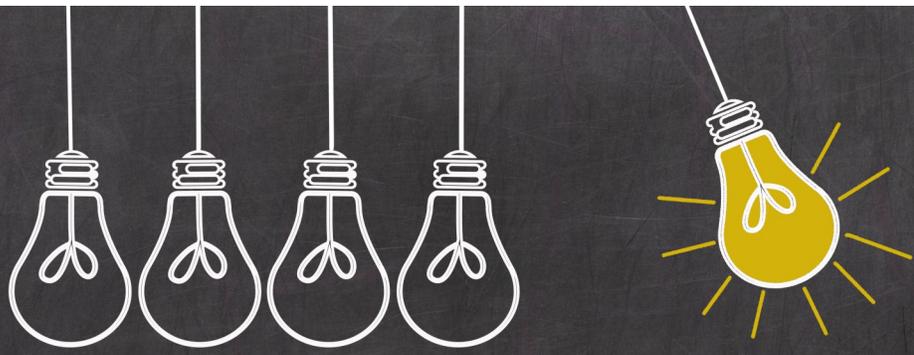


Weekly Briefing

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Electrified Vehicles: Perspectives on Aggressive Rollout

- *The Nordic countries spurred an acceleration in demand for electrified vehicles.*
- *Even as U.S. federal policy is on the cusp of an adjustment toward less stringent fuel economy standards, global forces (e.g., China) are increasing the incentive to move toward electrified vehicles (plug-ins and battery electric EVs).*
- *Such a shift would require auto company incentives and partnerships with state governments to drive policies tilted toward EV incentives.*

Nordic countries have made significant progress in providing incentives to stimulate demand for EVs. In so doing, they have provided a demonstration of the price reductions necessary in order to see automotive buyers switch from a conventional vehicle to an EV. What about the U.S.? Or the Big Ten region where significant assets and people tied to mobility live and work? What about the future of this region as ongoing transportation disruption pose risks of capital and labor flight to China? What are we doing here in our region to secure a competitive edge in the next decade?

I will state up front two assertions. First, long term cost trends on renewable energy, batteries, electrified and connected vehicle technology are moving down. This positions the economics of new mobility favorably as compared to conventional internal combustion engine vehicles. Second, global leadership on climate change strongly suggests that we will need to reduce CO₂ emissions from the transport sector. Indeed, China's leaders are likely to move consistently over the long run in this direction.

- What does it mean to have China move in this direction? A population of 1.3 billion people, with a target of 80% urbanization rate, selling nearly 30 million new vehicles each year: This adds up to significant market moving power.
- China wants to be a leader in “new energy vehicles.” Our great domestic companies and our people working in the mobility sector want to be leaders and can be if we move decisively to promulgate demand.

I will offer up some policy and economic analysis on these issues in the coming months, but here is an outline of thinking about what we can do together as one team for a vibrant and prosperous future for our region.

Think Big and With Sense of Urgency

- U.S. new vehicle sales are peaking after 8 years of solid gains. Free cash flow from the automotive sector will begin to flatten and decline. There will be, on the margin, less cash to invest in new technologies. This makes it even more important to establish partnerships and collaboration with state governments.
- Competitors in China will be waiting to snap up new tech, from solid state batteries to wiring harnesses for EVs to the tech used in EVs and autonomous and connected vehicles. The manufacturing base will shift to China even more than it has thus far. This poses a sense of urgency to make the transition to electrified vehicle platforms.
- We need a big push to avoid losing jobs as other countries, especially China, move to achieve Paris agreement targets. What about the Midwest region? What would a package of plans and policies look like to achieve a 30% market share of EVs in Michigan, Illinois, Ohio, and Indiana? Based on the Nordic country study as well as our regional strengths, here are some “must haves:”
- Regional state support for battery manufacturing. We need to produce batteries here in the region to gain experience in scalable facilities. A package of private and government capital is necessary.
- A regional scrappage program. There are nearly 15 million vehicles on the roads in Michigan, Illinois, Ohio, and Indiana. Offer state incentives in 2020 time frame in the amount of \$7,000 to scrap 8+ year old vehicles and lease of a new electrified vehicle. Another policy tool is to make these customers exempt from paying registration fees.
- For the OEMs, propose that they make their “employees, friends, and neighbors” discount programs available only for electrified vehicle leases. We need to get people driving these vehicles — and work out the kinks through experience. What a great way to deliver this experience through these discount programs.
- Over the long run, as costs come down and demand firms up, the incentive menu can be dialed back.
- Let's get going — unless we seize upon a united plan now, we risk losing our good jobs and economic growth.