



U.S. DEPARTMENT OF ENERGY

January 2016

LOAN PROGRAMS OFFICE

INVESTING *in* AMERICAN ENERGY

DRIVING ECONOMIC GROWTH: ADVANCED TECHNOLOGY VEHICLES MANUFACTURING

NOTE FROM THE EXECUTIVE DIRECTOR

The Advanced Technology Vehicles Manufacturing (ATVM) loan program has played a key role in helping the American auto industry propel the resurgence of manufacturing in the United States.

Since the Loan Programs Office (LPO) closed its first ATVM loan in 2009, more than \$8 billion has been committed to projects that have supported the production of more than 4 million fuel-efficient cars and more than 35,000 direct jobs across eight states. These loans helped to build new manufacturing facilities, and retool and modernize aging plants across the United States.

In addition to increasing the nation's global economic competitiveness, these projects are helping strengthen local economies. In many cases, suppliers choose to locate near manufacturers, which can create new domestic manufacturing ecosystems.

This report highlights three regions where new advanced manufacturing ecosystems have been established due in large part to projects financed by the ATVM loan program.

MARK A. McCALL
Executive Director

January 2016



LPO has committed more than \$8 billion in loans to projects that have supported the production of more than 4 million fuel-efficient cars and more than 35,000 direct jobs across eight states.

MANUFACTURING BY THE BAY

In January 2010, LPO closed a \$465 million ATVM loan to Tesla Motors, Inc. to produce specially designed, all-electric plug-in vehicles and to develop a manufacturing facility in Fremont, California at a recently shuttered auto plant.

Since starting production of the award-winning Model S in Fremont, Tesla has helped revive an auto manufacturing ecosystem some had feared would wither after the previous occupants ceased operations at the plant and suppliers to original equipment manufacturers (OEMs) departed. Presently, Tesla is the largest auto employer in California, and with more than 9,000 people working in the state, future employment growth is anticipated.

In addition to its direct employment, Tesla has spurred the creation of an advanced manufacturing ecosystem driven by the desire for supply chain localization that is boosting the overall economy around Fremont.

Eclipse Automation, Inc., a Canadian supplier of custom automated manufacturing equipment, opened engineering offices and a service shop in Fremont, citing Tesla as a driving factor in its decision. Australian component manufacturer Futuris Automotive Group moved into a facility in nearby Newark to manufacture leather seats and the interior roofing system of the Model S and Model X.

The growth of advanced manufacturing and its supply chain in the area is having additional impacts on the overall local economy. To meet the needs of the influx of people working and living in the Fremont area, the city approved the creation of the Warm Springs Innovation District that will feature offices, housing, shopping, and entertainment near the new Warm Springs BART public transit station.

“Supply chain localization, and being 10 miles down the road from Tesla, is fantastic.”

SAM COUGHLIN
 GENERAL MANAGER
**FUTURIS AUTOMOTIVE
 GROUP IN THE
 UNITED STATES**



Tesla’s Fremont, California manufacturing plant brought the first full-size, electric vehicle to market with its Model S, and has created a Bay Area automotive hub.

As Tesla expands, it has the potential to spread economic growth to other areas of the country, which appears to be occurring already. Building on its success in Fremont, Tesla is constructing its “Gigafactory” near Reno, Nevada, which will manufacture lithium ion batteries for the next generation Tesla plug-in electric vehicle and commercial and residential battery packs. Tesla has estimated that this facility will create 6,500 jobs and help drive down the cost of the battery pack by more than 30 percent.

Learn more *at* energy.gov/lpo/tesla

ATVM PROJECT REGIONAL IMPACTS: SAN FRANCISCO BAY AREA

\$465 MILLION TESLA LOAN LEADS TO REGIONAL GROWTH



January 2010 ATVM loan helped Tesla develop a manufacturing facility in Fremont, California at a recently shuttered auto plant.



With its Model S, Tesla brought the first zero-emission, zero-gas, full-size electric vehicle to market.



More than 1,500 jobs created at Tesla ATVM-supported facilities and 9,000 total California employees, making Tesla the state’s largest auto employer.



Suppliers of custom manufacturing equipment and seat and roofing materials have relocated to the Fremont area to be nearer to Tesla.

BOOSTING FUEL ECONOMY IN THE SOUTHEAST

In January 2010, LPO closed a \$1.45 billion ATVM loan to Nissan North America, Inc. to manufacture its all-electric LEAF vehicle, including associated battery packs and electric motors. By taking advantage of the competitive rates offered by the ATVM program, Nissan was able to “onshore” its production of the LEAF for the North American market.

The loan to Nissan was used to construct and equip one of the largest advanced battery manufacturing plants in the United States, retool its Smyrna, Tennessee manufacturing facility for assembly of the LEAF, and to construct an efficient and environmentally friendly paint plant. Nissan also used the loan to develop an electric power train production line for the LEAF vehicle within its engine manufacturing facility in Decherd, Tennessee. The ATVM loan has helped to support 1,300 jobs. In 2014, the LEAF became the top-selling electric plug-in vehicle in the United States and by September 2015, more than 85,000 LEAFs had been sold in the United States.

The Nissan facility is part of a growing automotive industry ecosystem in Tennessee, which supports more than 30,000 jobs in the automotive industry. As vehicle manufacturing expands in the state, a local supply chain is beginning to grow with more than 40 companies announcing automotive-related projects across the state in 2014.

About 200 miles east of Nashville, Alcoa expanded its aluminum manufacturing facility to meet the demand for high-strength, lightweight aluminum in the auto sector. Popular vehicles like the Ford F-150 light duty truck are shifting to aluminum to help reduce vehicle weight, increase vehicle payload and towing capacities, and improve fuel economy. Alcoa expects to add 200 full-time jobs at the plant.

The ATVM loan to Nissan has helped to support 1,300 jobs in Tennessee.



Nissan’s advanced battery facility and other manufacturing plants in Tennessee have made American production of the all-electric LEAF possible.

LPO offered a conditional commitment for a \$259 million ATVM loan for this project in March 2015. Alcoa is the first project to be issued ATVM conditional commitments since LPO clarified eligibility for component suppliers in April 2014.

As our economy has improved and more advanced technology vehicles are being manufactured in the United States, component suppliers are showing greater interest in locating their facilities closer to the demand for their product, creating opportunities for new automotive hubs like the ones developing in Tennessee.

Learn more at energy.gov/lpo/nissan

ATVM PROJECT REGIONAL IMPACTS: STATE OF TENNESSEE

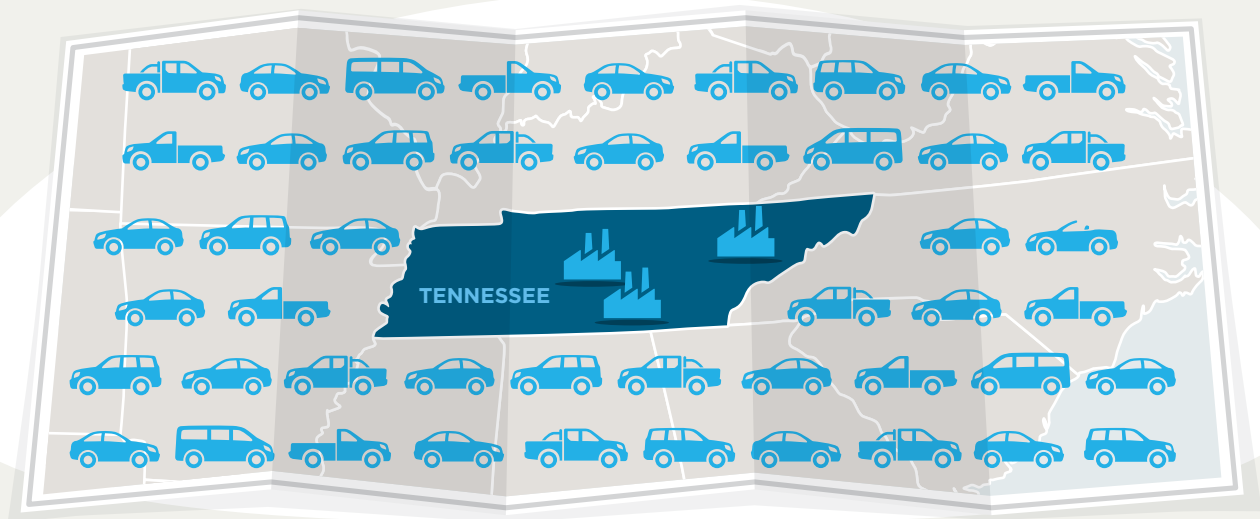
\$1.45 BILLION NISSAN LOAN & \$259 MILLION CONDITIONAL COMMITMENT TO ALCOA BOOST AUTOMOTIVE INDUSTRY IN THE SOUTHEAST



January 2010 ATVM loan helped Nissan build one of the largest advanced manufacturing plants in the United States and retool facilities for production of the all-electric LEAF.



Alcoa has expanded its aluminum manufacturing facility to meet the auto industry's increasing demand for high-strength, lightweight aluminum.



Nissan directly created 1,300 jobs with ATVM loan support and Tennessee now supports 30,000 automotive industry jobs.



In 2014, the LEAF became the top-selling electric plug-in vehicle in the U.S. and by September 2015, more than 85,000 LEAFs had been sold in the U.S.

KANSAS CITY, HERE WE COME

In September 2009, LPO closed a \$5.9 billion ATVM loan to Ford to upgrade 13 facilities in six states. Ford created or preserved more than 33,000 jobs at these ATVM-supported facilities. One of these facilities is the Kansas City Assembly Plant in Claycomo, Missouri, that opened in 1951. The Kansas City area has a rich automotive manufacturing history, dating back to 1909 when Henry Ford chose the area for the company’s first plant outside of Detroit. However, amidst the economic downturn in 2009, an auto industry analyst predicted that the Claycomo facility could be closed.

By investing \$1.1 billion in 2011 with help from the ATVM program, Ford was able to retool facilities to manufacture the Transit van and increase production of the F-150 light-duty truck. As demand for the new, aluminum-bodied F-150 has increased, Ford announced in February 2015 that it would add 900 employees at the Kansas City Assembly Plant. The company added a third shift for the truck line, which increased the number of hourly employees at Claycomo to 6,450—the highest ever at the plant.

“It’s what needs to happen in the Kansas City area.”

BOB MARCUSSE,

PRESIDENT AND CEO,
**KANSAS CITY AREA
DEVELOPMENT COUNCIL,**

ON FORD ANNOUNCING
THE ADDITION OF 900
MORE JOBS AT THE
CLAYCOMO PLANT.



Ford’s Kansas City Assembly Plant in Claycomo, Missouri has increased production of the F-150 light duty truck, created jobs, and attracted suppliers to the area.

The increased production at the Ford facilities in the Kansas City area has also played a part in building up the area's advanced manufacturing ecosystem. Since 2013, 11 suppliers have opened plants in the Kansas City area to be closer to the manufacturers with which they have contracts. These suppliers have generated 1,800 jobs and \$75 million in new payroll.

Learn more *at* energy.gov/lpo/ford

ATVM PROJECT REGIONAL IMPACTS: KANSAS CITY AREA

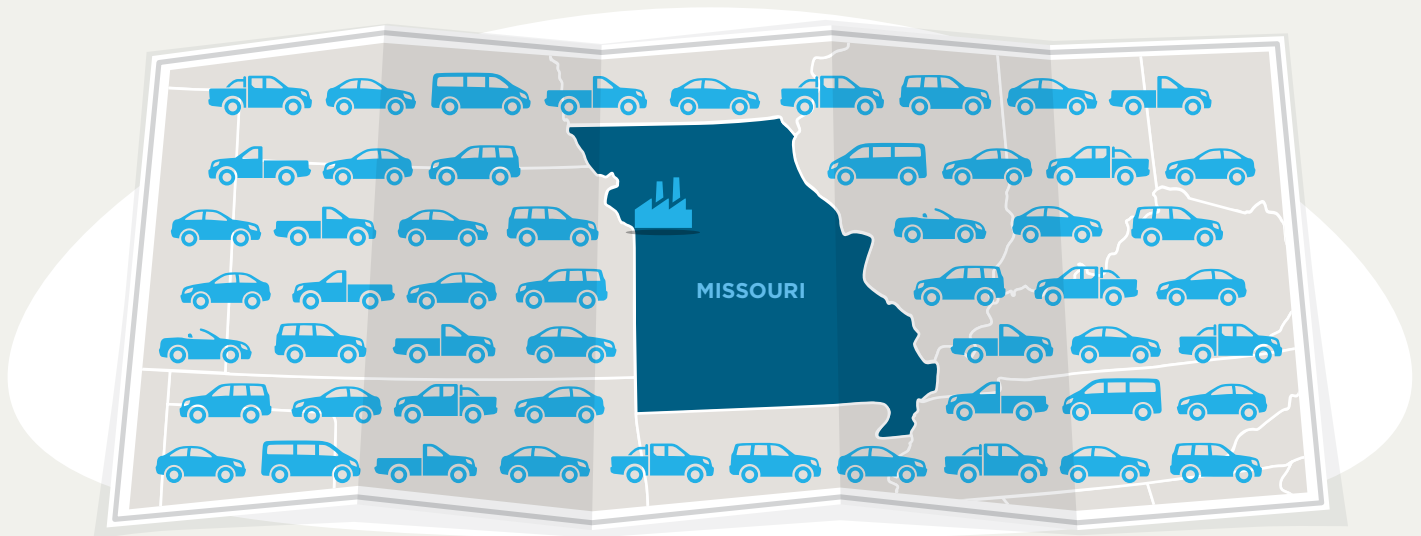
\$5.9 BILLION FORD LOAN UPGRADED 13 FACILITIES IN 6 STATES, INCLUDING MISSOURI



September 2009 ATVM loan supported Ford's upgrading of Kansas City Assembly plant in Claycomo, Missouri amidst predictions of closing.



\$1.1 billion invested by Ford in the Kansas City area to build the Transit van and increase production of the F-150 light duty truck.



Ford created or preserved 33,000 jobs across the United States with the ATVM loan and announced the addition of 900 jobs at the Claycomo plant in February 2015.



Since 2013, 11 auto components suppliers have opened plants in the Kansas City area to be closer to manufacturers, generating 1,800 jobs and \$75 million in new payroll.

STEERING TOWARD THE FUTURE

By committing more than \$8 billion in loans to date, the ATVM program helped revive a U.S. auto manufacturing sector that was struggling along with the rest of the economy. Now the industry is looking toward future growth. This future includes meeting the Corporate Average Fuel Economy (CAFE) standard of 54.5 miles per gallon by 2025 for light-duty passenger vehicles that President Obama announced in February 2012.

The auto manufacturing revival and the demand for components that will help to meet fuel economy standards have combined to create greater demand along the supply chain. This demand includes light-weighting materials like aluminum, fuel-efficient tires, and a variety of other technologies.

As has happened in places like Fremont, Kansas City, and across Tennessee, auto manufacturers and component suppliers are taking advantage of supply chain localization and creating advanced manufacturing ecosystems around the country.

With more than \$16 billion in remaining ATVM loan authority, LPO is poised to continue helping the auto industry grow local economies across the United States while increasing American economic competitiveness around the world.

LPO has more than \$16 billion in remaining ATVM loan authority.

Learn more *at*
energy.gov/lpo/atvm

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For more information, please visit: energy.gov/lpo