

## AUTOS

# Growing pains: Inside EV startup Rivian's push to ramp up production



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*Normal, Illinois* — Rivian Automotive Inc. has the plant, the workforce and the demand — if only it could get the semiconductor chips.

The upstart electric-vehicle maker was the first company to bring an all-electric pickup to market with the launch of its R1T, and is widely regarded as a serious competitor to both EV heavyweight Tesla Inc. and legacy automakers in the industry's accelerating electric transition. It has significant backing from Wall Street, raising roughly \$12 billion in 2021's largest initial public offering, and major investors including Amazon.com Inc. and Ford Motor Co.

But the Irvine, Ca.-based startup — as well as this central Illinois home to its manufacturing operations — is experiencing growing pains. It's facing all of the usual obstacles to ramping up vehicle production. But it's doing it from the ground up — no easy feat in the best of times, let alone amid myriad supply-chain disruptions, a pandemic and the war in Ukraine, to name just three of the headwinds battering the global automotive industry.

"Whether you're looking at an existing OEM or us, these are complex orchestras of activity where you need supply chain to ramp, you need the production lines to ramp, you need all the equipment to ramp," Rivian CEO RJ Scaringe, 39, told The

Detroit News in an interview at the company's plant here last week. "What's unique about our launch is really that the plant is outrunning the supply chain."

Supply-chain and production issues caused Rivian to miss its delivery target for 2021, slash its 2022 production forecast in half, and keep the Normal plant running on only one shift for now. Its stock price has fallen significantly since its IPO, and it reported a more than \$2.4 billion net loss in the fourth quarter.

But the plant is, in fact, running — and Rivian showcased its manufacturing process in the former Mitsubishi Motor Manufacturing of America plant to media for the first time last week. The company says it is on track to meet its goal of producing 25,000 vehicles this year after making just over 2,500 in the first quarter. And the company, which was founded by Scaringe in 2009, already is focused on its second generation of electric vehicles, to be built at a planned \$5 billion plant in Georgia.

"It's a game of schedule chicken. It's a very challenging ramp process," Scaringe acknowledged. "But we're clearly working through it, and we look forward to the days where components aren't shorting our production."

## **More time than parts**

The manufacturing process here starts with the stamping department, where sheets of metal are pressed into vehicle parts and examined for surface defects.

From there, they go to body assembly — one for the R1T and R1S SUV, another for electric delivery vans.

Many of the plant's processes — from a line where doors are removed from vehicle frames, to another where weld quality is checked — are highly automated, with robots performing much of the assembly work while employees control and monitor the equipment, perform quality checks and complete other tasks that must be done by hand.

The vehicles move through the roughly 4-million-square-foot facility, making their way, among other stops, through general assembly, the paint shop and the line, where finishing touches are completed.

Rivian has two former Nissan Motor Co. executives running operations at the plant: Tim Fallon, vice president of manufacturing, and Victor Taylor, who directs the plant's stamping, body and plastics departments.

To understand the complexities of ramping up production, look no further than the R1T, which Rivian launched last year at a starting price of \$67,500. The vehicle has some 2,000 parts that are sourced from approximately 400 suppliers.

"The vast majority of those parts are ramping as we hoped," Scaringe said. "But a small fraction of them aren't, and those then become the constraints, which then drive our output as an overall plant."

The plant itself dates to the late 1980s, when it was built by Diamond-Star Motors, a joint venture between Mitsubishi Motors Corp. and the former Chrysler Corp. that produced models such as the Eagle Talon and Mitsubishi Galant.

The plant shuttered in 2015 after Mitsubishi ended its U.S. manufacturing operations. Rivian looked at buying some of Mitsubishi's leftover equipment and instead ended up buying the plant in 2017 for \$16 million.

Since then, the startup has renovated the facility, transforming it into a pristine, brightly lit space with aesthetic touches such as live plants, framed artwork, new tiling in the restrooms and amenity-laden employee break areas. It's added on nearly a million square feet to accommodate production of the R1T, R1S (starting price: \$72,500) and the 100,000 delivery vans Amazon has ordered.

Already, the plant's workforce of 5,000 employees and growing is larger than it was as a legacy manufacturing operation. The facility has the capacity to build 150,000 vehicles per year, with plans to boost that to 200,000.

"We run out of parts far faster than we run out of time — which means we're only able to run the plant on a single shift, and really not even fully utilize all the time that's there," said Scaringe.

The biggest challenge has been procuring scarce chip supplies — an issue that has plagued the global auto industry for more than a year, but one that presents some unique obstacles for a startup.

"It's very much supply based upon allocation, and that allocation is generally set based on historical performance. So what did you do last year? What did you need last month? And that informs the amount that we're allocated this month," said Scaringe. "We don't have a last year, and by pure definition, this month we should produce a lot more than last month, and next month we should produce a lot more than this month."

Automotive suppliers tend to prioritize legacy customers over newer companies, said Sam Abuelsamid, an autos analyst at Guidehouse Insights.

"If there's a limited supply and you've got customers that want to buy several million parts, versus somebody that wants to buy a few thousand or a hundred thousand," he said, "you're going to go with the customer that's going to buy more of them."

Despite Rivian's struggles ramping up production, Abuelsamid believes there are still plenty of opportunities for them to succeed, given their in-house automotive expertise, the massive amount of capital they've raised, Amazon's backing, and the solid reviews their products have garnered. Plus, they've actually managed to deliver some vehicles, unlike many in the burgeoning EV space.

"It's going to be important for Rivian to get their house in order on production, start ramping up and getting a more steady production rate, and also getting their costs under control — and also getting their next generation of products out the door in the next couple of years," he said. "Because the R1T and the R1S in their current form, these are fairly premium products."

To that point, Rivian already has its eyes set on a second generation of vehicles that will span different segments and price points than the R1 lineup. The planned Georgia facility, Scaringe said, will produce vehicles on Rivian's R2 "small-format, crossover SUV platform."

## **'Growing pains'**

Normal Mayor Chris Koos has a framed letter from Scaringe thanking him for his R1T preorder hanging on the wall of his office, which overlooks the town of roughly 50,000's Uptown district.

The Bloomington-Normal metro area in McLean County has managed to avoid extreme economic highs and lows, in part thanks to its concentration of white-collar jobs in finance and insurance. But Koos acknowledged the closure of the Mitsubishi plant dealt a psychological blow to the community.

Although the area's largest employer, State Farm Insurance, remains a pillar of the local economy with some 14,000 jobs at its Bloomington headquarters, the community also has felt the effects of the company's move to expand out of state in recent years.

So the infusion of investment and employment from Rivian has been a welcome development, though the startup's faster-than-expected growth has come with challenges — namely, an acute housing crunch. Listings are few and far between, properties sell almost immediately, prices are up, and the area doesn't have enough housing geared toward young professionals. Local hotels are routinely booked up with Rivian employees.

"I think the community is going to go through some growing pains," said Koos. "There's no question about that."

Rivian's growth has rippled across other parts of the local economy, as well, helping to insulate hospitality, retail and air travel from the effects of the pandemic.

Heartland Community College is working on a training program with the company, and Illinois State University is adding an engineering school.

"There's a new vibrancy driven by Rivian," said Carl Olson, executive director of the Central Illinois Regional Airport in Bloomington. "It's always been a strong, vibrant community and region. Now it's getting broader and stronger."

CIRA has seen a boost in passenger numbers, car rentals, fuel sales and concessions because of Rivian employees flying in and out of the airport. And Delta Air Lines Inc. resumed nonstop flights to Detroit, a service it had suspended when Mitsubishi left.

And soon, the community will begin to collect property tax revenue tied to the Normal plant after an abatement expires at the end of the year.

Rivian's ramp-up could also represent an opportunity for organized labor. Though the United Auto Workers historically has struggled to organize workers at foreign-owned auto plants, the union did represent workers at the Mitsubishi plant.

UAW President Ray Curry, speaking at an Automotive Press Association event in Detroit last month, specifically cited Rivian as an opportunity to gain a foothold among EV startups.

"We'll be pursuing organizing opportunities at any of the startups that are there. There's a number that we've talked to workers, and workers have interest," he said. "There are opportunities that we believe are in union-dense areas and where we've actually represented UAW members in the past."

Scaringe told The News he would prefer Rivian's workforce to remain non-union. He described it as the company's job to create good working conditions, such as predictable work schedules and fair compensation.

"We as a company deeply believe that we're in the best position to do that for ourselves," he said. "Now ultimately, it's the choice of the employees to decide if

they don't feel we're doing a good job. ... Certainly there's always room for improvement. But this is something that we hope to remain responsible for and not have to have a third party come in and try to manage that."

Meanwhile, the economic activity spurred by Rivian comes as Bloomington-Normal sees other manufacturing business tick up — chocolate maker Ferrero, for example, is building a factory there — and as Illinois attempts to position itself as an EV manufacturing and technology hub.

"Our goal was always to try to diversify the economy, because if anything happens to insurance ... we'd be in a lot of trouble," said Patrick Hoban, CEO of the Bloomington-Normal Economic Development Council. "So we're really happy to see manufacturing coming back."

His organization aims to leverage Rivian's presence to help its members grow their businesses and attract new employers to the area. Hoban estimates the county's population could grow from 172,000 to 200,000 in the next five years.

In the meantime, his organization is focused on finding ways to attract new residents and retain students after they graduate from local colleges and universities. With Rivian planning to grow its local workforce and ancillary businesses already popping up, there's a need for talent — even as local officials look to manage the growth.

"I think it's critical that we try to maintain some of the quality-of-life things that we have, and sometimes rapid expansion can interact with that in a negative way," Koos said.

As Normal evolves, he said, he envisions it "still being a small Midwestern community" — but one that's "on the cutting edge."

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