



# Rickylec Cost Analysis

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This problem situation was written by Luis Antonio Camacho Galindo (luiscamacho@tec.mx), with the purpose of serving as discussion material in the classroom; it does not intend to illustrate good or bad administrative practices. The story in this document is based on different people's experiences; some data has been modified at the request of the people and institutions involved.

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## The Company

It's 2026, the year electric cars have conquered consumers. On the one hand, there's the feeling of helping the planet by not emitting CO2 from gasoline engines, and on the other, the financial savings that make transportation cheaper when using electricity instead of gasoline or diesel.

Electric car manufacturers have grown exponentially in recent years, making these vehicles increasingly common on city streets.

Ricardo Gómez, a businessman recognized nationally for his successful marketing companies, recently heard on the news that the Mexican Federal Government plans to launch a mini electric vehicle that effectively replaces motorcycles and motorcycle taxis, with an enclosed cabin and the sustainable advantage of not using fossil fuels.

Ricardo knows that assembling vehicles is more than just a production plant. Providing good after-sales service requires a national infrastructure of service and parts workshops, which demands millions in investment.

Ricardo has set out to assemble a prototype electric vehicle to compete with these initiatives, leveraging his connections with brokerage firms and considering how to finance an IPO with Mexican or foreign stock.

To achieve this, he has researched how to import the body from China and complement it with a chassis from Mexico, in order to comply with the rules of origin governing international trade and free trade agreements.

He has created a new company known as The Rickylec Motors Company. It is introducing an innovation in the production of Electric Vehicles (EV) by using an imported car body along with Mexican batteries produced in Tlaxcala and a modern chassis produced in Hidalgo. The goal is to sell the EV under \$100,000 MXN.

Electric Vehicles are helping the planet and saving gasoline money to owners.



Image. TecGPT, 2026.



Image. TecGPT, 2026.

## Unit Cost

The Rickylec Motors Company uses a job costing system for its production costs and a predetermined factory overhead rate based on direct labor hours to apply factory overhead to all jobs. The new EV is an exciting innovation for the market with great expectations inside the country and for export.

During the second semester of 2026, the company processes three requests:

1. EV-Rickylec-001 with 600 units delivered to MTY
2. EV-Rickylec-002 with 800 units delivered to CDMX
3. EV-Rickylec-003 with 750 units delivered to GDL

In order to manufacture a single unit, the following materials are needed:

- ▶ Imported pre-assembled car body: 1 container of 100 units at \$3,000,000 pesos (MXN)\*/container
- ▶ Chassis with batteries: \$38,000 pesos(MXN)\*/unit
- ▶ Direct labor: 96 hours at \$375.35 pesos(MXN)\*/day based on professional minimum wage in the country.

The estimated overhead for 2026 includes:

- ▶ Indirect labor: 160,000 hours
- ▶ Facility rent: \$16,000,000 pesos (MXN)
- ▶ Utilities : \$9,500,000 pesos (MXN)
- ▶ Maintenance and repairs: \$4,900,000 pesos (MXN)
- ▶ Equipment depreciation: \$13,000,000 pesos (MXN)
- ▶ Others: \$3,700,000 pesos (MXN)

Ricardo is interested in the following information:

- ▶ How many direct labor hours will be used?
- ▶ How much is the overhead application rate?
- ▶ The EV unit cost.

\* 1.00 MXN = 0.058060 USD (X-rates.com, 2026).

## Job Costing

Ricardo wants to obtain:

- ▶ The total manufacturing cost for each job
- ▶ A Statement of Cost of Goods Manufactured
- ▶ An Income Statement for the semester ended December 31, 2026.

## Normal Cost

The cost to be calculated is per job.

Revenues are calculated adding a profit margin of 30% to the Cost of Goods Sold.

Sales and Administrative Expenses as a percentage of revenues are 40%.

Inventories are not considered since the production of the semester is scheduled: it begins and ends within the period without accumulating stock, except for an initial materials inventory consisting of:

Imported pre-assembled car body: no units since it has to be imported

Chassis with batteries:  $(100 \text{ units} * \$38,000 \text{ pesos}) = \$3,800,000 \text{ pesos (MXN)}$

The jobs are completed in the production area, 95% of the third job is delivered to the store and the rest remains in the finished goods inventory. First and second jobs are fully delivered.

## From Jobs to Process Costing

After working with Job Costing, Ricardo considers standardizing the process and increasing production capacity. He wants to be sure that all EVs are profitable and produced under the same specifications.

There is no need to buy new machinery. However, he is wondering if this change in the costing system will be profitable since it will allow the company to reduce the Selling and Administrative Expenses to 20% of revenues. He needs to determine the new cost optimization strategy.

The process is working with two cost pools: assembly and detailing.

After this migration, the supervisor wants to know:

- ▶ The new Cost of Manufactured Goods
- ▶ The new Income Statement for the semester ended on June 30, 2027.

During the first semester of implementation of this change in the company, the Accountant decides to use the Weighted Average Method. The following data is obtained:

Revenues are calculated adding a profit margin of 30% to the Cost of Goods Sold.

**Table 1.** Data related to the Process Costing System.

|                              | Assembly Process  | Completion | Detailing Process | Completion |
|------------------------------|-------------------|------------|-------------------|------------|
| Beginning Inventory          | 0                 | 0%         | 0                 | 0%         |
| Beginning Inventory costs    |                   |            |                   |            |
| DM                           | \$ 3,800,000.00   |            | \$ -              |            |
| COCO                         | \$ -              |            | \$ -              |            |
| Completed units in the month | ¿?                |            | ¿?                |            |
| Beginning units in the month | 2,150             |            | ¿?                |            |
| Ending WIP Inventory         | 150               | 80%        | 90                | 60%        |
| Period costs                 |                   |            |                   |            |
| DM                           | \$ 146,200,000.00 |            | \$ -              |            |
| COCO                         | \$ 64,231,030.00  |            | \$ 60,000.00      |            |

\* Consider all Direct Materials added in Assembly Process.

**Source.** Own elaboration, 2026.

The supervisor wants the accountant of Rickylec Motors Company to suggest the optimal costing system and to determine whether the new EVs are profitable. Due to the differences between job costing and process costing he'll need to calculate the unit cost of production of the EVs using both. It's also crucial to be able to offer the EVs under \$100,000 MXN or find alternatives to make it possible.

Ricardo is expecting a detailed cost analysis report using both job costing and process costing methods, including a recommendation on which method to use based on findings.