

Field meal allowance audit

Fiorena Redes Elétricas S.A. • Top-ups from January to December 2025

Felipe Fonseca • Orbita Space

October 15, 2026

1. Summary

Financial control asked for an answer to one question: the meal allowance paid per crew-day in the field rose 9.5% from the first to the second half of 2025; how much of that is legitimate spending, and how much was paid outside the rules?

- The audit covered 155,909 top-ups, totaling R\$ 7.63 million.
- **A total of R\$ 305,184 (4.0%) was paid outside an objective rule** and can be reversed or recovered.
- Another R\$ 234,808 (3.1%) has no support in the field log and needs confirmation from the base.
- Improper payments explain 49% of the jump in the second half; 41% came from more overnight stays, which are legitimate.
- The largest defect is the duplicates created by the August switch to a new top-up system.

2. The rule audited

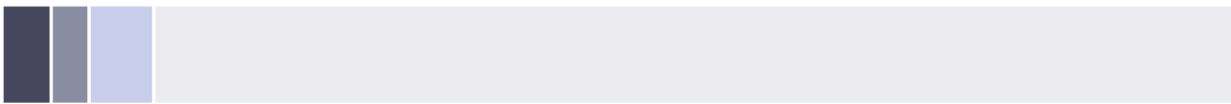
Lunch of R\$ 52 per day in the field; dinner of R\$ 44 only with an overnight stay recorded in the log; extra of up to R\$ 24 only with a listed justification ("travel of more than 300 km" or "workday extended by more than 2 hours"); cap of R\$ 120 per person per day; one top-up of each type per day; only for people who are active, not on vacation or leave, on a crew in the field that day.

The top-ups were cross-checked against 33,254 crew-in-the-field records in the log, the HR roster of 649 people, and HR's vacation and leave records.

3. Method

1. **Prepare:** use the day worked, not the entry date, and link each top-up to the HR roster, leave records and the field log.
2. **Objective rules:** duplicates, person not on duty, dinner with no overnight stay, extra with no justification, and the daily cap (only the excess is improper).
3. **Support:** was the crew in the field? Is the justification for the extra valid, vague or missing (with tolerance for typos)?
4. **Expected:** each base and month compared with the other bases in the same month; a group falls outside the range when it strays much further than normal (Tukey's criterion on the amount per field day divided by the median of the bases that month, with at least 15 crew-days in the group).
5. **Risk score:** one point per signal (rule broken, no field record, vague or missing justification, base and month above the range).
6. **Conclusion:** Improper (rule broken), Review (no field record, or two signals or more), Watch (one signal), Compliant (none).

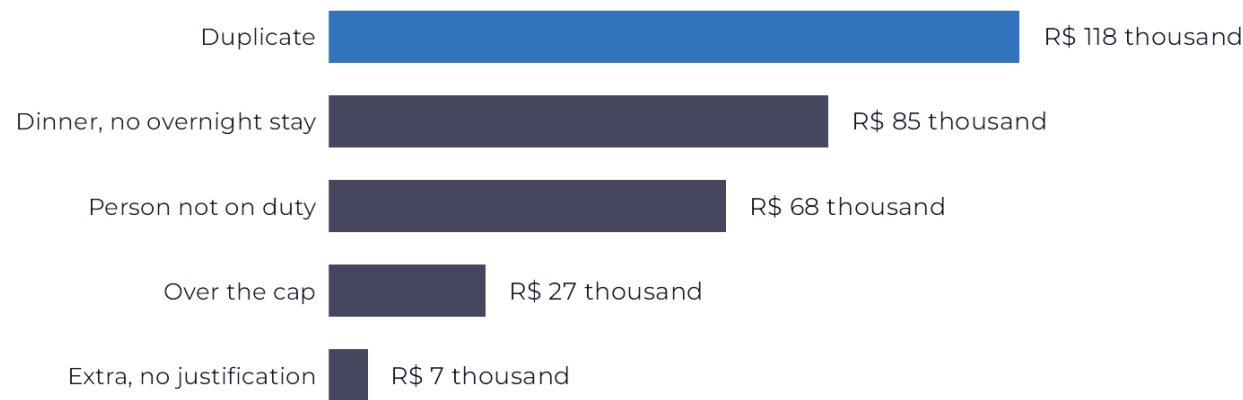
4. Results



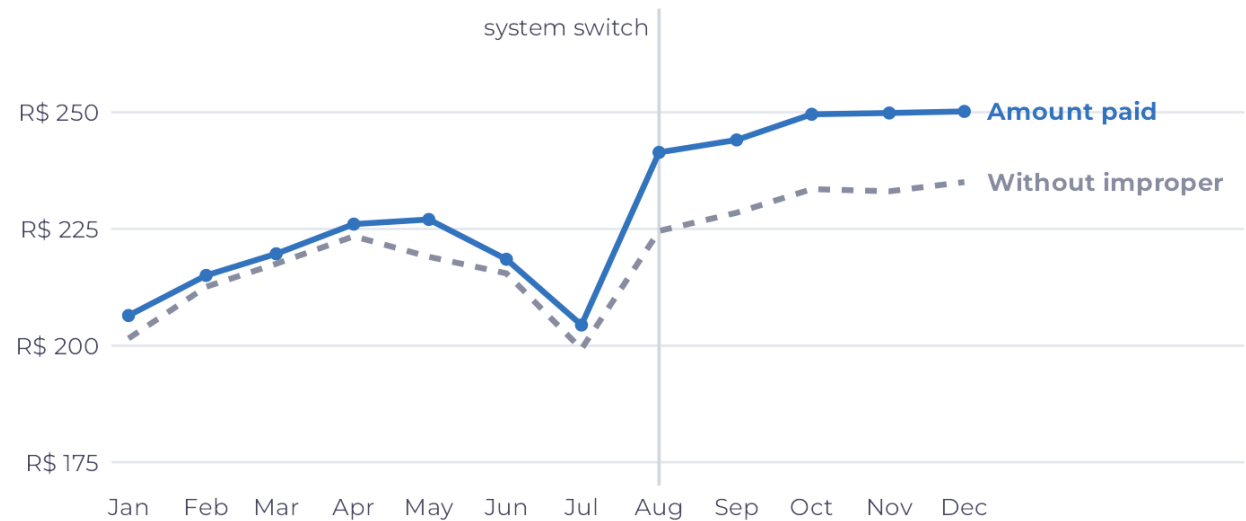
Conclusion	Top-ups	Amount	% of amount
Improper	7,487	R\$ 305,184	4.0%
Review	4,546	R\$ 234,808	3.1%
Watch	8,686	R\$ 400,428	5.2%
Compliant	135,190	R\$ 6,686,956	87.7%

Review is made up almost entirely of top-ups with no field record (R\$ 234 thousand). Watch is not an accusation: 7,925 of the 8,686 top-ups in Watch are there only because their base and month were above the range; the top-up itself follows the rule.

4.1. Improper payments by type of defect



4.2. The jump in the second half

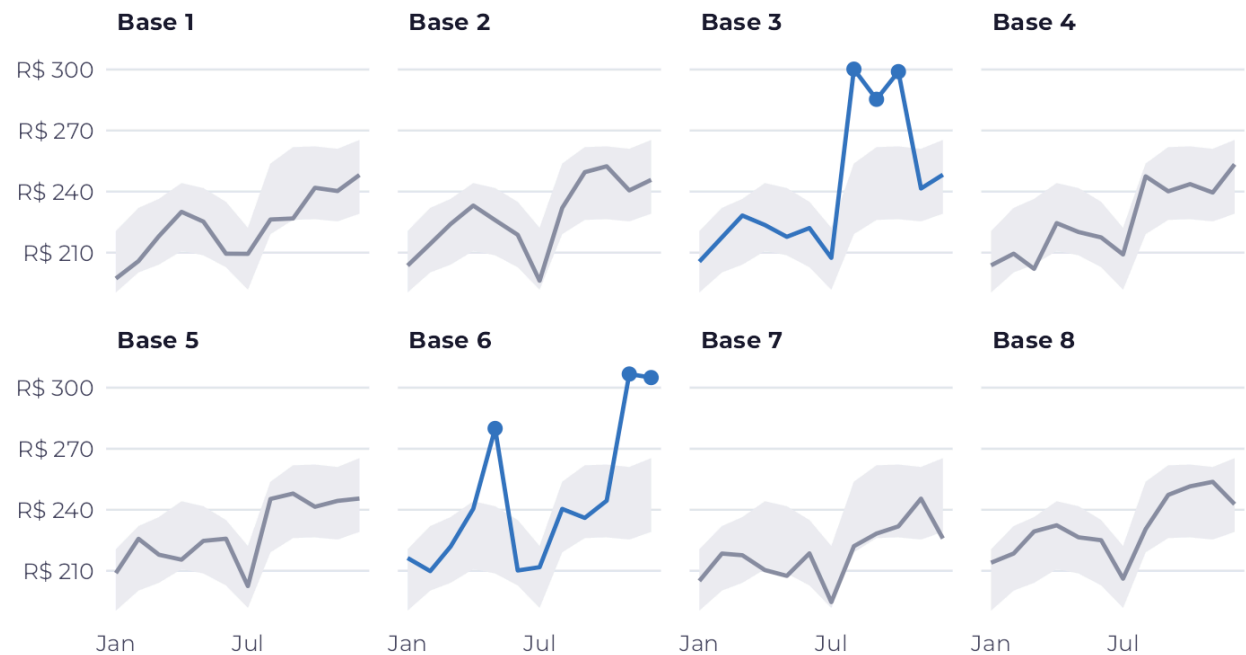


The amount per field day went from R\$ 218.62 to R\$ 239.47. Of the R\$ 20.86 increase, R\$ 10.21 came from improper payments and R\$ 8.51 from more legitimate dinners (overnight stays went from 11.5% to 16.8% of field days); the remaining R\$ 2.14 came from the extras that come with overnight stays.

The July dip has a cause in the data: July and January are the months with the most people on vacation (in July, 81 lineworkers per business day, against 37 in the median month), and each crew went out with 3.5 people, against 3.8 in the median. The amount per person in the field did not fall: it stayed between R\$ 58 and R\$ 60 from January to July.

5. Findings

- **August system switch.** Duplicates of R\$ 6,124 through July and R\$ 112,116 from August to December.
- **Late HR roster.** Of the top-ups paid during vacations, 100% fell in the first five days of the period.
- **Dinner with no overnight stay at two bases.** Base 3 and Base 6 account for 100% of dinners with no overnight stay and are the only bases with months above the expected range.



6. Cases to review

The full list (12,033 top-ups classified as Improper or Review) comes with this report as a CSV file. First, the 5 people with the largest improper amount (only the improper part of each top-up); then, the 5 with the largest amount to review:

Conclusion	Employee ID	Base	Period	Top-ups	Amount	Reason
Improper	F6561	Base 3	Jan 6 to Dec 17, 2025	40	R\$ 1,692	No overnight
Improper	F5109	Base 3	Feb 24 to Dec 11, 2025	40	R\$ 1,684	No overnight
Improper	F5730	Base 6	Mar 27 to Dec 31, 2025	37	R\$ 1,616	No overnight
Improper	F4119	Base 6	Apr 22 to Dec 26, 2025	37	R\$ 1,580	No overnight
Improper	F5573	Base 3	Jan 23 to Dec 29, 2025	37	R\$ 1,568	No overnight
Review	F3012	Base 2	Jan 13 to Dec 29, 2025	18	R\$ 936	No field record
Review	F8211	Base 6	Jan 23 to Dec 31, 2025	18	R\$ 936	No field record
Review	F1355	Base 6	Jan 8 to Dec 23, 2025	18	R\$ 872	No field record
Review	F6862	Base 6	Jan 15 to Dec 16, 2025	17	R\$ 852	No field record
Review	F1035	Base 2	Jan 27 to Dec 29, 2025	16	R\$ 832	No field record

Reason: No overnight = dinner with no overnight stay; No field record = no record of the crew in the field.

7. Recommendations

Finding	Recommended fix	Owner
Duplicates after the system switch	System block allowing one top-up per type, person and day	IT and the card provider
Late HR roster	Daily list of vacations, leaves and terminations sent to the top-up system	HR
Dinner with no overnight stay	Dinner released only when the field log records an overnight stay	Operations and base supervisors
Over the cap	Daily cap enforced by the system itself	IT
Vague justification	Justification picked from a closed list, not typed in	Financial control
Amounts already paid as improper	Reversal or recovery according to company policy	HR, with support from legal

KPIs to track every month: improper top-up rate (target below 0.5% of the amount paid), field record coverage (target above 99% of top-ups with the crew recorded in the field) and amount per field day by base, against the expected range.

8. Note on the data

This is a demonstration case: the company, the people and the records are fictional, generated by a script with defects of known size. That made it possible to check that the audit found all 12,905 planted defects and that none of the 19,885 records that only looked like errors ended up as Improper or Review. With real data, that check is done with the base, by reviewing a sample of each conclusion with people who know the process.