

GUÍA PRÁCTICA PARA CONTROLAR TU CONSUMO ELÉCTRICO

*Discover what uses electricity, where you may be able to save, and when
you need a technical solution.*

HOME • BUSINESS • WORKSHOP • SMALL BUSINESS

A free resource from

EL ELÉCTRICO

Professional Electrical Engineering & Services

BUELE CAPITAL BUSINESS & INVESTMENT S.A.S.

2026 Edition

INTERACTIVE CONTENTS — click the option that interests you.

YOU DO NOT NEED TO READ THIS ENTIRE GUIDE

Choose what you want to address and go directly to that section.

<u>MI CASA</u> MY HOME	Quiero reducir el consumo en mi vivienda.
<u>MI NEGOCIO</u> MY BUSINESS	Quiero controlar el consumo de mi comercio.
<u>MI TALLER / PYME</u>	Quiero revisar motores, compresores, bombas o maquinaria.
<u>CALCULAR CONSUMO</u>	Quiero estimar cuánto consume un equipo.
<u>MI PLANILLA SIGUE ALTA</u> MY ELECTRICITY BILL IS STILL HIGH	Ya revisé lo evidente y quiero entender qué ocurre.
<u>CATÁLOGO DE SERVICIOS</u>	Ya sé qué necesito y busco una solución técnica.

START HERE

Before switching things off, find out what is worth switching off.

Saving electricity does not mean living uncomfortably or working less. It means identifying where you are using energy without getting useful value in return.

Three concepts you need

W — WATTS: indicate power.

kW — KILOWATTS: 1,000 W = 1 kW.

kWh — KILOWATT-HOURS: indicate energy used over a period of time.

$$\text{kW} \times \text{operating hours} = \text{kWh}$$

Example: a 2 kW appliance effectively operating for 5 hours uses approximately 10 kWh. If that occurred for 30 days, it would total 300 kWh/month.

Many devices do not operate continuously at their rated power. Refrigerators, HVAC systems, automatic pumps, and other equipment may cycle on and off or vary their power. This formula is therefore useful for understanding and estimating; when you need to know exactly what is happening, measurements may be required.

[CALCULATE YOUR ENERGY USE]

[VIEW SERVICE CATALOG]

SECTION 2

MY HOME

Do not start with the phone charger. Start with power + time.

AIR CONDITIONING

- How many hours does it run?
- Are the filters maintained?
- Are doors or windows left open?
- Does the space receive excessive heat from outside?
- Is the selected temperature reasonable?
- Is the unit cooling normally?

If it no longer cools as it used to, running it for more hours will not necessarily solve the problem.

[VIEW HVAC SERVICES]

REFRIGERATOR / FREEZER

- Check door seals.
- Look for abnormal ice buildup.
- Make sure it has the required ventilation.
- Observe temperature and compressor behavior.

If it appears to run almost continuously, do not immediately conclude that it is faulty; it does deserve attention.

[VIEW REFRIGERATION SERVICES]

ELECTRIC SHOWER

- Find the wattage on its nameplate.
- Calculate total daily operating time.
- Convert minutes to hours before calculating.

You do not need to stop showering: you need to understand how much that use represents.

[CALCULAR CONSUMO]

WATER PUMP

- Does it start even when nobody is using water?
- Does it start and stop repeatedly?
- Does it run for too long?
- Has the pressure changed?
- Are there any leaks?

Do not bypass protections or controls. If its behavior has changed, the cause should be investigated.

[VIEW PUMP & AUTOMATION SERVICES]

LIGHTING

- Count how many light fixtures you have.
- Check their power rating.
- Identify how many hours they remain on.
- Eliminate unnecessary lighting without compromising safety.

Low wattage × many lamps × many hours still adds up.

ELECTRONICS

- Televisions, computers, game consoles, routers, and chargers also use electricity.
- Prioritize the highest-impact loads first.

Do not chase pennies while ignoring the major loads.

WANT TO IMPROVE SOMETHING IN YOUR HOME?

Electrical installations • Panels • Lighting • Pumps • HVAC • Automation • Fault diagnosis and other solutions.

[VIEW FULL SERVICE CATALOG]

MY BUSINESS

Here, electricity does not only cost money. It also helps generate revenue.

Saving energy in a business does not simply mean switching equipment off. It means eliminating energy use that is not creating value for your operation.

HVAC

Review schedules, maintenance, doors, windows, heat load, and selected temperatures. If you serve customers for many hours, small operating improvements can add up over the course of a month.

[VIEW COMMERCIAL HVAC SERVICES]

COMMERCIAL REFRIGERATION

Freezers, display cases, and cold rooms may operate continuously. Check seals, abnormal ice buildup, temperature, ventilation, and compressor behavior. Never compromise the conditions required to preserve products simply to save energy.

[VIEW COMMERCIAL REFRIGERATION SERVICES]

COMMERCIAL LIGHTING

Ten, twenty, fifty, or more light fixtures change the calculation. Determine how many there are, their wattage, how many hours they operate, and whether any areas are lit unnecessarily.

[CALCULATE LIGHTING USE]

PUMPS, EXHAUST FANS, AND OTHER EQUIPMENT

A small business may have several systems operating simultaneously. Do not analyze only the most visible appliance: look at the business as a whole.

WANT TO MODERNIZE, REPAIR, OR AUTOMATE YOUR BUSINESS?

[OPEN SERVICE CATALOG]

Does everything seem to be working correctly, but the electricity bill is still too high?

[ANALYZE MY ELECTRICITY BILL]

MY WORKSHOP OR SMALL BUSINESS

Here we stop looking at isolated equipment and start looking at the process.

Motors, compressors, pumps, machine tools, welders, ventilation, HVAC, refrigeration, lighting, and automation may all be part of the same production process.

MOTORS

- Operating hours.
- Load.
- Temperature.
- Starts.
- Noise or vibration.
- Changes from normal behavior.

Observation does not replace measurement, but it can tell you where to start measuring.

[VIEW MOTOR & CONTROL SERVICES]

COMPRESSORS

- Listen for possible air leaks.
- Observe starting frequency.
- Check pressure and operating hours.
- Check whether it runs when production is stopped.

A leak can mean you used electricity to produce compressed air that never performed useful work.

[VIEW PNEUMATIC SYSTEMS & AUTOMATION]

VARIABLE-FREQUENCY DRIVES, CONTROL & AUTOMATION

Not every process needs automation. But when a machine operates for many hours, improving how it is controlled can be as important as the equipment itself.

[VIEW AUTOMATION & CONTROL]

DO NOT CONFUSE PRODUCTION WITH WASTE

If you used more electricity this month because you produced much more, that is not necessarily a problem. The question may be: how much energy do I need to produce each unit of value?

Motors • Drives • Automation • Panels • Pumps • Pneumatic systems • Generation • Refrigeration • HVAC • Electrical installations and other solutions.

[EXPLORE INDUSTRIAL CATALOG]

SECTION 5

I WANT TO CALCULATE MY ENERGY USE

Make an estimate in under one minute.

POTENCIA	_____ W
HORAS DE UTILIZACIÓN	_____ horas/día
DÍAS	_____ días/mes
CONVERSIÓN	$W \div 1.000 = kW$

$$kW \times \text{hours} \times \text{days} = kWh/\text{month}$$

Example

$$1.500 \text{ W} = 1,5 \text{ kW}$$

$$1,5 \times 4 \text{ horas} \times 30 \text{ días} = 180 \text{ kWh/mes}$$

The result assumes that the equipment actually draws approximately that amount of power during the operating time used in the calculation.

[OPEN FREE CALCULATOR]

MY ELECTRICITY BILL IS STILL HIGH

This is where you should stop guessing.

You have reviewed schedules, calculated equipment use, and eliminated unnecessary consumption, but the bill still does not make sense.

- Did energy use change?
- Did demand or operating conditions change?
- Are any loads operating unnecessarily?
- Are motors or machinery involved?
- Is there a power-factor issue?
- Did any billing component change?
- Or is the energy use consistent with what your operation actually requires?

DO NOT BUY ANYTHING YET

Do not replace motors without a diagnosis. Do not install capacitors simply because someone said they 'save electricity.' Do not replace machinery before understanding the problem.

UNDERSTAND FIRST. THEN DECIDE.

TIER

Our analysis can begin with the information you already have: utility bills, equipment data, photographs, videos, available measurements, and technical documentation, and go deeper only when the case requires it.

[LEARN ABOUT TIER]

TIER is not the only entry point. If you already know the problem and need repair, installation, automation, or project execution:

[VIEW SERVICE CATALOG]

I NEED HELP

It does not matter if you do not yet know what the problem is called.

You can begin simply by telling us: “This is what is happening.”

ON-SITE SERVICE

Our operations base is in La Troncal, Cañar, Ecuador. Travel to other locations is evaluated according to location and the nature of the work.

REMOTE SUPPORT IN ECUADOR AND INTERNATIONALLY

Selected analysis, diagnostic, consulting, and technical assessment services can begin remotely.

- Utility bills.
- Photographs.
- Videos.
- Diagrams.
- Equipment data.
- Measurements.
- Technical documentation.

DISTANCE DOES NOT NECESSARILY PREVENT US FROM GETTING STARTED

We first review the problem and determine what can be handled remotely and what requires on-site intervention.

WHAT DO YOU NEED?

[I HAVE A FAULT — VIEW TECHNICAL SERVICES]

[I WANT TO INSTALL OR MODERNIZE SOMETHING — VIEW CATALOG]

[I WANT TO UNDERSTAND MY BILL — LEARN ABOUT TIER]

[I NEED REMOTE CONSULTING — REQUEST AN ASSESSMENT]

[I AM NOT SURE WHAT I NEED — TALK TO EL ELÉCTRICO]

THE FIRST STEP IS NOT ALWAYS HIRING A SERVICE

Sometimes you can solve the problem simply by using your equipment more effectively. That is what this guide is for. But when saving requires measurement, diagnosis, repair, design, installation, or automation, you do not have to start from scratch.

EL ELÉCTRICO

Construcciones eléctricas profesionales
BUELE CAPITAL BUSINESS & INVESTMENT S.A.S.

Information to understand. Technical expertise to diagnose. Technical capability to execute.

[[VIEW SERVICE CATALOG](#)]

[[CONTACT US](#)]

[[ANALYZE WITH TIER](#)]

TECHNICAL NOTE

The examples and calculations in this guide are for reference only. Actual energy use depends on the characteristics, operating conditions, and utilization of each piece of equipment. This guide does not replace measurements, inspections, manufacturer instructions, or technical assessments when required.