



Tti Testing Laboratories

OVER 30 YEARS OF EXCELLENCE IN QUALITY ASSURANCE



Tti Labs E-Mobility • Transportation Electrification Center

Pakistan doesn't need more EV imports. Pakistan needs EV **standards**.

From petrol to electron. Tested for Pakistan.

Battery testing and import inspection for the lithium batteries in Pakistan's solar storage, e-bikes and rickshaws. Kot Lakhpat, Lahore.



- 01 About
- 02 The rules
- 03 Pakistani heat
- 04 Four centers
- 05 Services
- 06 Who it's for

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REGULATOR-READY REPORTS

Tti Labs E-Mobility prepares reports for NEECA, EDB and PSQCA submissions, in the EDB/PSQCA dossier format.

Supports the NEV Policy 2025–30. Tested to international methods while PSQCA writes Pakistan's standards.

TRANSPORTATION ELECTRIFICATION CENTER

From petrol to electron. Tested for Pakistan.

Tti Labs E-Mobility independently tests and inspects the lithium batteries Pakistan now depends on. They power its solar storage, e-bikes and rickshaws.

Each test answers three questions. Does the battery deliver what its label claims? Do its protection electronics work? How does it perform in Pakistani heat?

The center works under Tti Labs' ISO/IEC 17025 quality system. Tti Labs has tested products since 1995, from its 25,000 sq ft headquarters in Lahore.

-  ISO/IEC 17025 accredited testing laboratory, PNAC LAB 022
-  ISO/IEC 17020 accredited inspection body, PNAC IB-006 (Tti Inspections Pvt Ltd)
-  First lab in Pakistan accepted by the US CPSC
-  22 labs in 17 countries through our partner Eurofins | MTS Global
-  Offices in Lahore, Karachi, Faisalabad and Sialkot



Battery testing



Import inspection



Charging




Standards & research



THE PROBLEM • 2026

Pakistan's EV battery rules are being written now.

Makers who test now will know where they stand. Others may find out at inspection.

In June 2026 the government asked EDB and NEECA to build battery testing and verification. It said enforcement may follow for companies that miss the standards. In August it asked PSQCA to draft lithium-ion EV battery standards.

Jun 2026

EDB and NEECA

Asked to build battery testing and verification.

Aug 2026

PSQCA

Asked to draft lithium-ion EV battery standards.

18 Feb 2027

EU battery passport

The EU requires a battery passport from this date.

2030

30% electric

Pakistan's target for new-vehicle sales.

**BATTERY AND EV MAKERS**

Substandard batteries are on the government's radar.

The government has flagged them as a consumer-safety risk.

**EVERYONE**

Local testing capacity is short.

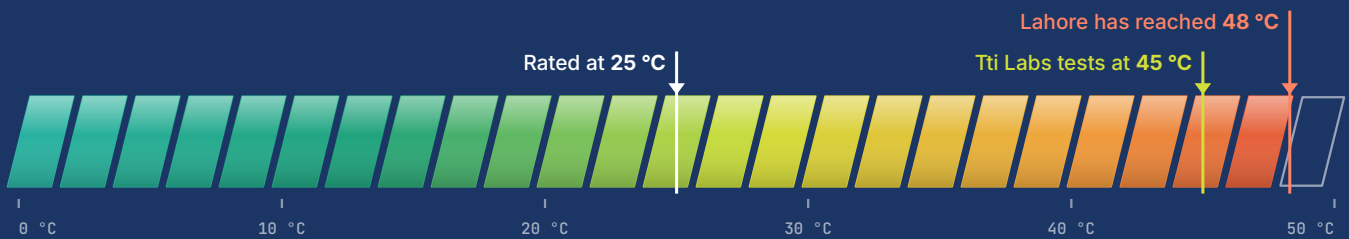
A National Assembly committee heard that PCSIR is the only adequate public battery lab.

Sources: ProPakistani, 11 Jun 2026 (battery testing directive, substandard batteries); Dawn via ProPakistani, 18 Aug 2026 (PSQCA standards); Energy Update, 4 Sep 2026 (testing capacity); Arab News (30% target); TÜV Rheinland (EU battery passport).

ANYONE SELLING INTO A PAKISTANI SUMMER

Rated at 25 °C, ridden at 48 °C.

Battery capacity is rated at 25 °C. Lahore has reached 48 °C. Tti Labs also tests at 45 °C, the high-temperature point in IEC 62660-1.



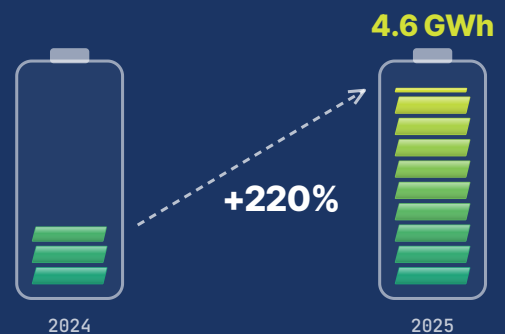
Most certificates are issued at 25 °C.



SOLAR BUYERS AND LENDERS

Labels you can't check.

Pakistan imported about 4.6 GWh of lithium storage in 2025, up 220%. Buyers rarely have a way to check a battery's rated capacity.



 Tti Labs E-Mobility tests for Pakistani conditions, **in Lahore.**

Sources: MDPI *Batteries* (25 °C rating); Climate of Lahore (48.3 °C record); EU JRC (IEC 62660-1 temperatures); pv magazine, 15 Jul 2026 (storage imports).

Batteries first. Then chargers.

Battery testing and import inspection start first. Charger, vehicle and battery safety (abuse) tests come later. Until demand or a rule justifies the equipment, partners deliver them.

 AT LAUNCH

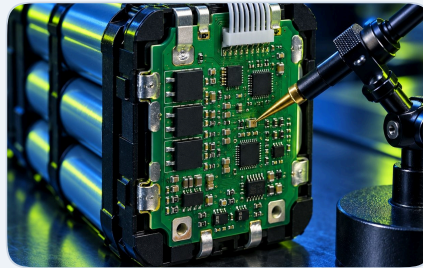
 COMING



Capacity & label check

 01 • Battery Testing Center

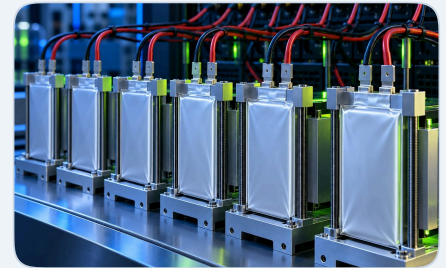
Capacity checked against the label at 25 °C and 45 °C



BMS cut-off checks

 01 • Battery Testing Center

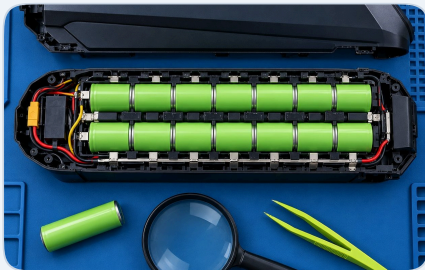
Over/under-voltage, over-current and temperature cut-off



Cycle life & state of health

 01 • Battery Testing Center

Capacity fade over cycles; health checks for warranty claims



Cell identification

 01 • Battery Testing Center

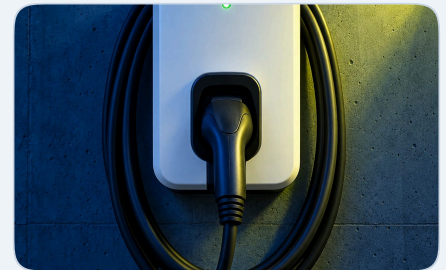
Proof of real cells, for battery pack makers



Import lot inspection

 02 • Import Inspection Center

Lot sampling and identity checks by Tti Inspections Pvt Ltd, the group's ISO/IEC 17020 inspection body



Charger safety

 03 • Charging Center

AC charger safety and OCPP pre-testing, through a partner first

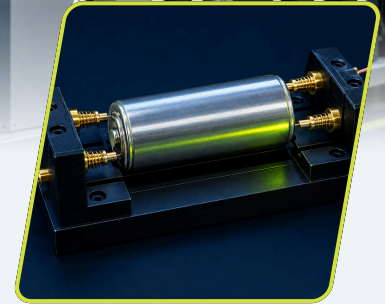
03 Charging Center

-  Through a partner first
-  AC charger safety
-  OCPP pre-testing
-  IEC 61851 / 62196
-  Pakistan Grid Stress Test™ (voltage swings, heat, dust), once equipped

04 Standards & Research Center

What standard will Pakistan follow? Tti Labs is helping shape it.

-  Open Tti Labs test methods for battery verification, proposed to PSQCA as a Pakistan Standard
-  Test data shared with PSQCA's standards work
-  E-bike range study (AIS-040 method)
-  UN 38.3 and 2W/3W pack safety (AIS-156 / UN R136), once the abuse-test area is built
-  In development: a grid-hardened method (voltage, dust and heat) and a proposed 2W/3W battery-swap standard



SERVICES • DAYS • WHAT YOU RECEIVE

Six services. Five ready now.

Five services run now, in the days shown. UN 38.3 and pack safety tests follow once the abuse-test area is built. Testing in Lahore is faster than abroad, with no dangerous-goods shipping and local witnessing.

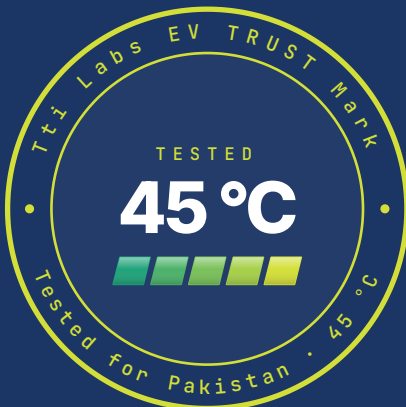
SERVICE	DAYS	YOU RECEIVE
Battery Capacity & Label Check	5	Capacity, energy and internal resistance vs label, at 25 °C and 45 °C
BMS Protection Check	5	Over/under-voltage, over-current and temperature cut-off results
Cycle-Life Test	Per method	Capacity fade over a set number of cycles
State-of-Health Check	3–7	Remaining capacity vs rated, for warranty claims
Import Lot Inspection	2–5	Sampling, identity checks and lab tests on a consignment
 UN 38.3 / pack safety	Coming	Once the abuse-test area is built

 AT LAUNCH

IEC 62660-1 (EV cell performance) · IEC 62620 (industrial and storage lithium batteries) · BMS checks

 COMING

UN 38.3 (transport tests) · IEC 62619 (industrial and storage battery safety) · AIS-156 / UN R136 (2W/3W packs) · IEC 61851 / 62196 (charging). For reference, car packs: UN R100.



Tti Labs EV TRUST Mark™

Ready for fleet purchase specs.

-  QR-verifiable report
-  Public registry
-  Valid 12 months with re-testing

The mark says “tested”, not “certified”. Fleets can write “EV TRUST Mark required” into purchase specs.

WHO IT'S FOR

Independent test data for makers, sellers, lenders, fleets and government.

Assemblers and importers

Reports in EDB/PSQCA format

Solar installers, distributors and banks financing solar

Lot checks before you sell or lend

Battery pack makers

Proof of real cells

Fleets

"EV TRUST Mark required" in purchase specs

Government

Independent test data

COMING NEXT

BATTERY PASSPORT

Every battery should have a passport.

The EU requires one from 18 February 2027. It covers EV and e-bike batteries, and industrial batteries over 2 kWh. Tti Labs will offer a QR passport modelled on the EU's when an exporter to the EU asks. It shows health, origin and safety by QR, A/B/C grading for solar reuse, and recycling records. It also holds the documentation green-finance applications ask for.

BATTERY PASSPORT

EXAMPLE

Health	
Origin	
Safety	
Recycling records	
Solar reuse	A B C



TRAINING

Short courses for specialists.

NAVTTTC already runs a free six-month EV technician course. Tti Labs adds short courses for specialists.



2 days

Battery Safety Officer

1 day

BESS Installer Safety

NEECA 2024

Charger Installer

Aligned with NEECA's 2024 charging regulations

Certificates say "Certificate of Attendance".



Tti Testing Laboratories



Don't just import EVs. Make them Pakistan-ready.

Get your battery tested

Book an import inspection

Book a pre-test call

Pilot batch: 50% off for the first 20 companies, on listed services

Government lab?

No, Tti Labs is independent. Only EDB, PSQCA and NEECA grant approvals.

Already certified in China?

Keep it. Tti Labs checks that the batteries you received match it. It also tests what the certificate may not cover, such as capacity in Pakistani heat.

EDB help?

Tti Labs' reports follow the EDB/PSQCA dossier format.

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Images are illustrative and AI-generated; they do not show Tti Labs premises, clients or samples. Tested to international methods while PSQCA writes Pakistan's standards. The passport card shows example values.

