

Eastern Africa's electric corridor is no longer theoretical

A 3,200 km Nairobi–Addis Ababa expedition tested what it takes to move electric buses across borders.

DISTANCE TESTED

3,200 km

Round trip across 2 nations

FLEET & TEAM

6 buses • 19 travellers

Cross-border operational trial

OPERATIONAL FOCUS

System readiness

Charging, terrain, border & grid



NAIROBI - ADDIS BUS TRIP: SEPT 2026

*To the Nordic-
Africa EV Summit,
connecting Africa's
e-mobility
transition
& Nordic's global
leadership in e-
mobility.*



KEY DATES:

NAIROBI DEPARTURE: THUR 10TH SEPT 3 AM

ADDIS ARRIVAL: FRI 11TH SEPT 7 PM

CITY TOUR DATES: 12-13TH SEPT

SUMMIT DATES: 14-16TH SEPT

ADDIS DEPARTURE: THUR 17TH SEPT 4 AM

NAIROBI ARRIVAL: FRI 18TH SEPT 7 PM

PACKAGE HIGHLIGHTS

- ✓ Nordic Africa EV Summit ticket
- ✓ Kenya-Ethiopia return transport
- ✓ 6 nights Addis accommodation
- ✓ 2 nights Moyale accommodation

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Nairobi – Addis Ababa intro video

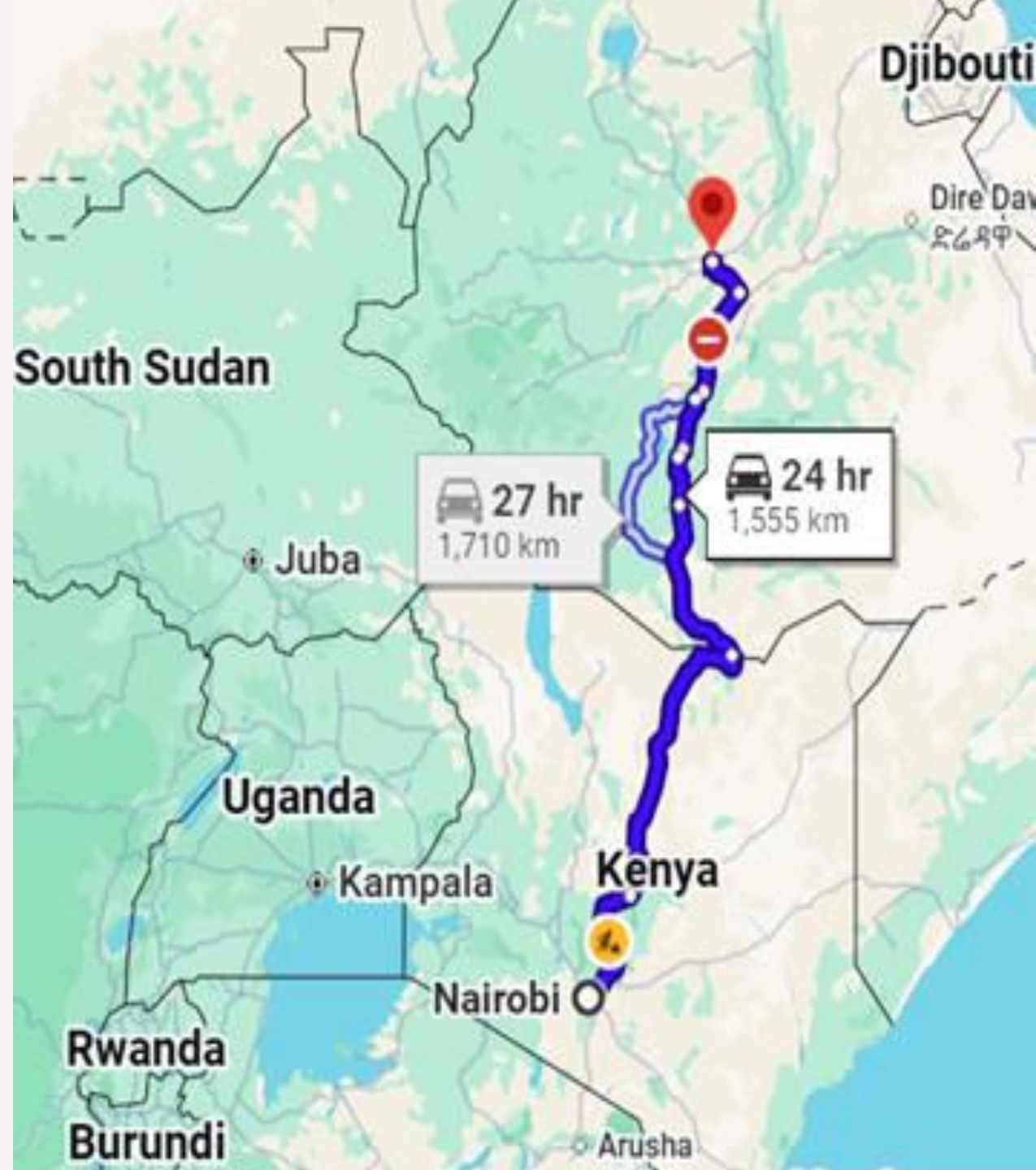


EXPEDITION OBJECTIVE

We set out to test the whole system, not just the bus

Feasibility of long-distance electric bus travel between Kenya and Ethiopia

Charging, route planning, border processes, communications and stakeholder coordination



ROUTE EXECUTION

The route looked simple on paper; the real journey was longer

Divergences, detours, and charging stop coordination expanded travel distance and operational hours beyond the initial model.

PLANNED OUTBOUND

1,555 km

54 hours trip time

Calculated baseline using ideal highway speeds and mapped rest points.

ACTUAL OUTBOUND

1,740 km

86 hours trip time

+155 km extra driving for charging access points and road diversions.

EXPEDITION TOTAL

3,200 km

7 days • 6 buses

19 expedition travellers navigating real-world transit conditions.

ENERGY LOGISTICS

Charging had to travel with the buses

Portable DC chargers

Supported Isiolo, Marsabit and Moyale where fixed infrastructure was limited.

Two 300+ km buses

Relied on portable CCS2 chargers, with up to 10 hours of overnight charging.

Fixed 160 kW chargers

Could boost state of charge by more than 50% in about an hour, but outages added delays.



Kenya leg - Terrain turned range into an operational variable

Nairobi-Moyale

Rises, drops, rises again, then falls again.

Marsabit

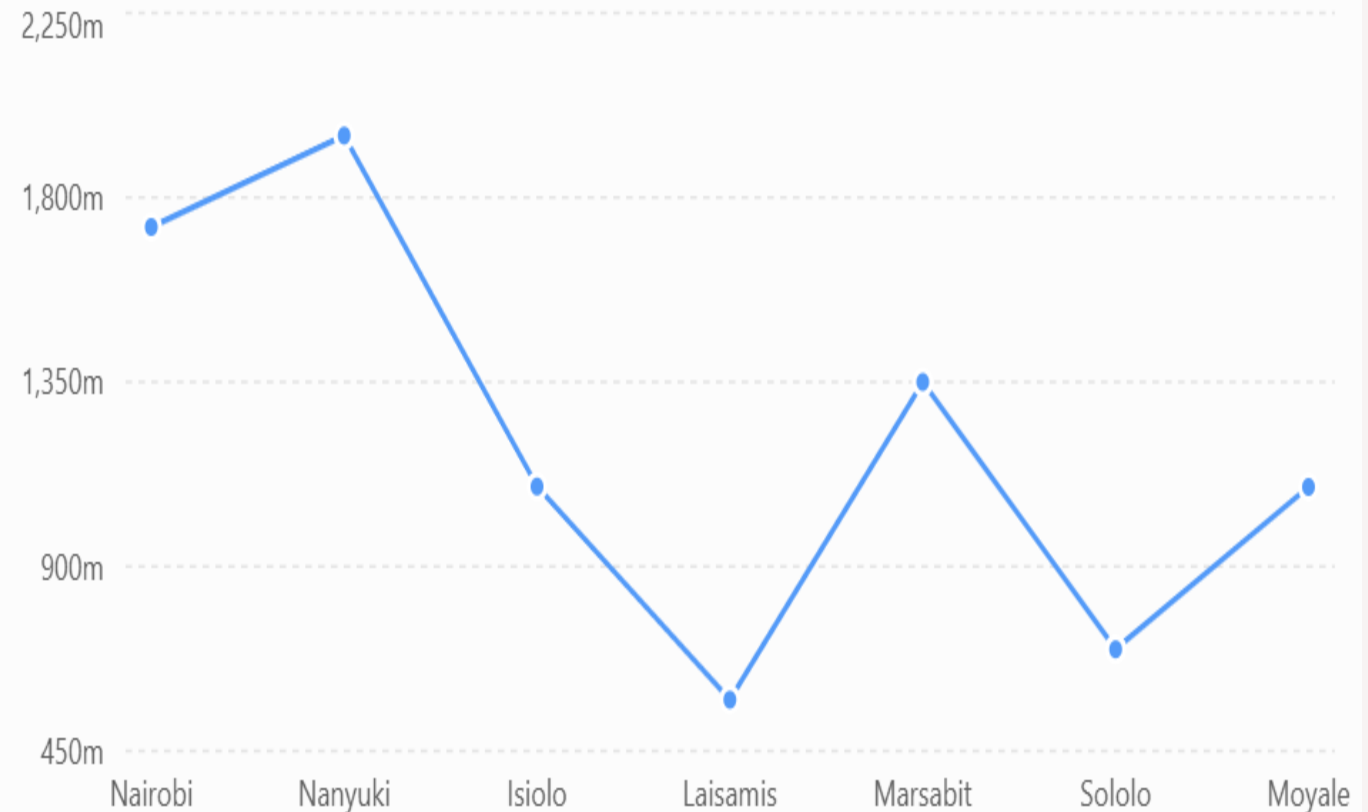
The climb toward Marsabit left one bus arriving in power-saving mode at 10% state of charge.

Range changes with elevation

The approaches to Marsabit needed some top up charging at Laisamis from Isiolo side, and at Sololo from Moyale side.

Nairobi-Moyale Electric Bus Expedition: Elevation Profile

Approximate elevation at the principal towns along the Nairobi-Moyale route. Points are shown in route order; horizontal spacing is not proportional to road distance.



Elevations are approximate town elevations, not continuous GPS road-elevation data.

Ethiopia leg – Changes that require an open mind

Moyale – Addis Ababa

A series of ascending rises and lesser falls.

Ethiopian highlands

A mix of steady changes in altitude, climate, road and security conditions.

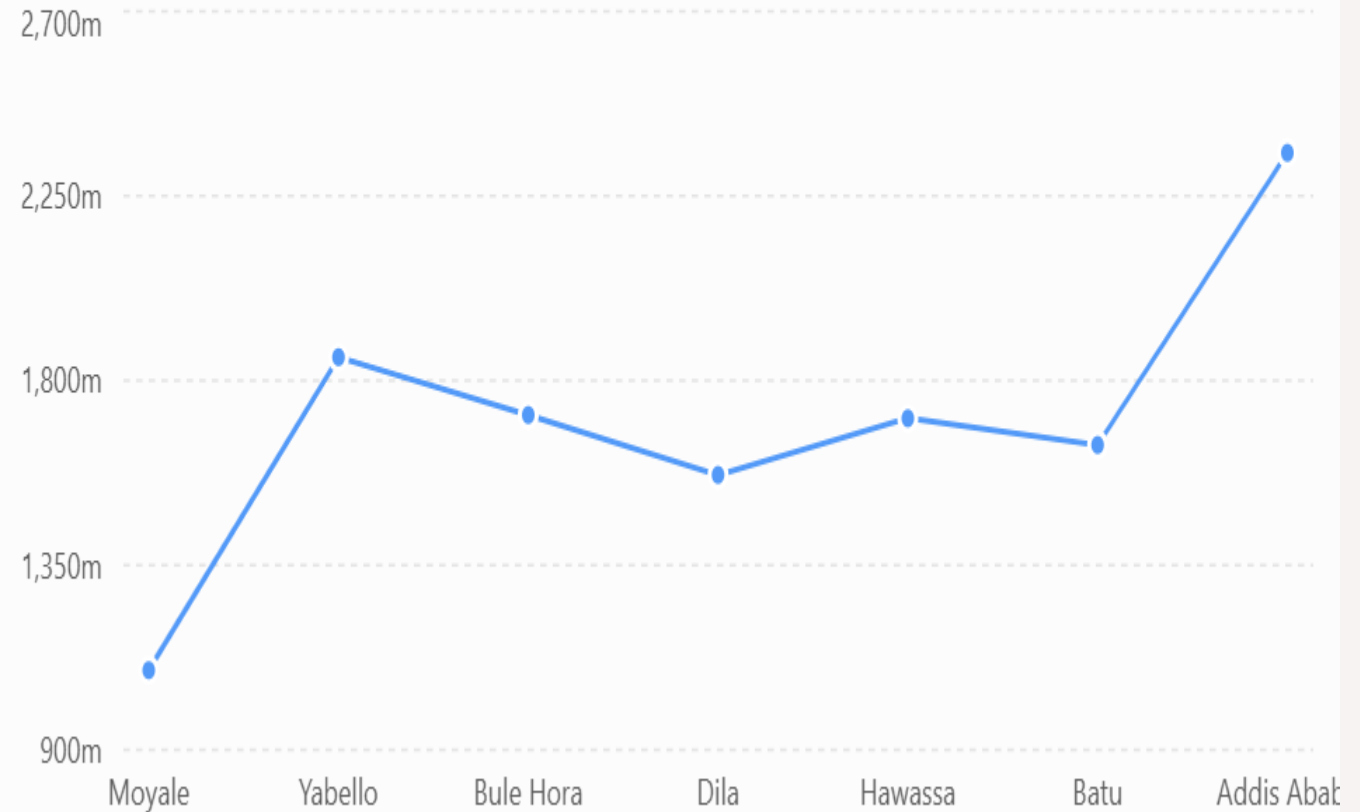
Range changes with elevation

The approach to Hawassa needed some top up charging at Dila, and the approach to Addis Ababa needed top up charging in Bishoftu.

Moyale–Addis Ababa Electric Bus Expedition: Elevation Profile

Approximate elevation at the principal towns along the Moyale–Addis Ababa route.

Points are shown in route order; horizontal spacing is not proportional to road distance.



Elevations are approximate town elevations, not continuous GPS road-elevation data.

HISTORIC MILESTONE!

At Moyale border point, the electric transport corridor became visible

Electric buses from Nairobi and Addis Ababa met at the border for the first time ever — a tangible proof point for future regional transport links.

The moment connected vehicle technology with governments, utilities, operators and development partners.



The hardest part was multiple coordination & failure points

Delays accumulated across charging, border procedures, road conditions, closures, public engagement and photo stops.

Night-driving restrictions and human fatigue narrowed the operating window.

When a portable charger failed on the return journey, a relay bus had to help and one bus waited a full day.



The termite hill represents Africa's ability to build, organize and achieve remarkable things with limited resources.

The electric bus represents where mobility is going; cleaner, smarter and increasingly African.

CORE TAKEAWAYS

Five lessons now guide the next corridor

01 The technology can travel beyond normal urban operations.

02 Infrastructure determines practical corridor range.

03 Contingency plans turn disruptions into manageable delays.

04 Cross-border mobility requires institutional coordination.

05 Real-world demonstrations generate knowledge that models cannot.

Africa does not need to wait for the global electric mobility transition; African cities can help lead it.

OPERATIONAL ROADMAP

From expedition insight to corridor readiness

Publish a corridor charging map with connector, power, access and backup details

Build primary, secondary and emergency charging options into every major segment

Create an expedition control centre for location, battery, charging, border status and driver welfare

Standardise vehicle preparation, emergency response, border crossing, communications and public engagement

Nairobi – Addis Ababa electric bus expedition highlight video



CONCLUSION & DISCUSSION

Africa can help lead the electric mobility transition

The expedition turned a regional corridor from an idea into a shared operational agenda: better infrastructure, clearer procedures, stronger coordination and reliable data.

Webinar Question:

Would you like to be part of the Cape Town to Addis Ababa EV Expedition in Nov 2027 just before COP32 Summit in Ethiopia?

PRESENTED BY



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