

Integrate EV Charging Station Availability Along Selected Route

10/28/2026 01:54 AM - Prashant Jain

Status:	New	Start date:	10/28/2026
Priority:	Normal	Due date:	10/29/2026
Assignee:	Prashant Jain	% Done:	0%
Category:		Estimated time:	4.00 hours
Target version:		Spent time:	0.00 hour
Description Jira Story: Integrate EV Charging Station Availability Along Selected Route Issue Type: Story Priority: High Component: EV Navigation / Maps & Routing Labels: EV-Charging, API-Integration, Route-Navigation Summary Integrate an EV charging station API to retrieve and display charging stations along a user's selected route, including real-time availability status where supported. Description As an EV driver, I want to view charging stations along my selected route and check their availability so that I can plan charging stops and avoid unavailable charging stations during my journey. The application will integrate with a suitable EV charging station provider, such as TomTom EV Search API, to retrieve charging station information based on the calculated route geometry. Scope of Work Evaluate the EV charging API provider and confirm API access, pricing, regional coverage, and live-status support. Integrate the routing service to obtain the selected route's coordinates or polyline. Develop a backend API to search for charging stations along the route. Retrieve available station details, including: Charging station name and location Connector types and charging power Availability status, where supported Station identifiers and provider details Filter stations based on route proximity and vehicle connector compatibility. Display charging stations on the map with distinct status indicators. Handle API errors, rate limits, missing data, and unknown availability status. Secure API credentials and implement appropriate logging and monitoring. Acceptance Criteria Given a user has selected a source and destination, when a route is calculated, then the system retrieves charging stations along the route. Given charging station data is available, when results are returned, then the application displays station markers and relevant station details. Given live availability data is supported by the provider, when station status is retrieved, then the application identifies available, occupied, and offline chargers where those statuses are supplied. Given a station's availability cannot be confirmed, then the application displays its status as Unknown rather than Available. Given a vehicle's connector requirements are configured, then incompatible charging stations can be filtered out. Given the API request fails or exceeds a rate limit, then the application handles the error gracefully and provides appropriate feedback. Given the user changes the selected route, then the charging station results are refreshed for the new route. Given API credentials are configured, then secrets are not exposed in frontend or mobile application code. Technical Approach Routing: Obtain route geometry from the existing routing service or integrate a routing API. Charging station search: Evaluate TomTom EV Search Along Route API or an alternative provider with suitable coverage. Backend: Expose an endpoint such as POST /api/ev-chargers. Request: Accept route coordinates, search corridor width, and applicable connector filters. Response: Return normalized station details and availability status.			

Frontend: Render station markers and status indicators on the route map.

Dependencies

API provider account and credentials

Provider approval or subscription, if required

Existing route calculation and map rendering functionality

Confirmation of target-market coverage and real-time availability support

Definition of Done

API integration is implemented and reviewed.

Unit and integration tests cover successful responses, failures, and missing status data.

Charging stations are displayed correctly on the map.

API keys are stored securely.

Error handling and logging are implemented.

API documentation and setup instructions are updated.

Acceptance criteria are verified in the test environment.

Out of Scope

Reserving or booking charging stations

Processing charging payments

Initiating or stopping a charging session

Guaranteeing charger availability at the time of arrival

Deliverables

Backend charging station search endpoint

Frontend map integration

Availability status handling

Automated tests and integration documentation