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CASE STUDY

Strategic Partnership Powers EV Infrastructure Growth in Sugar Land, Texas

Executive Summary

The City of Sugar Land, Texas, in partnership with BTC POWER and OnPoint EV, successfully addressed a critical gap in available regional DC fast charging infrastructure by placing strategic EV installations at Sugar Land Airport and a local recreation center. This initiative demonstrates how municipalities can partner with American OEM manufacturers and experienced charge point operators to deliver scalable EV charging solutions that serve travelers and local communities while maintaining industry-leading 98% uptime standards.

Filling the Infrastructure Gap: Sugar Land Addresses Regional Charging Desert

Sugar Land, a city just southeast of Houston, ranks high on the list of the United States "best cities to live in." Its sweet name derives from two centuries of sugar production. However, airport travelers in Sugar Land soured on the fact that there was no EV charging station available, for either private vehicles or available EV rental cars. In fact, there was no DC fast charging infrastructure within a 15-to-20-mile radius of the airport. This gap in an essential service created barriers for regional travelers within the local community, particularly impacting Sugar Land Airport's rental car operations.

The city of Sugar Land recognized that addressing this infrastructure gap required more than simply installing charging equipment. The city needed a comprehensive approach involving experienced partners who could navigate the complex process from site selection through commissioning and ongoing operations. In fact, Sugar Land installed two separate EV charging stations, in the airport and near a community center.

The Partnership Approach: Collaborative Infrastructure Development

Rather than attempting to develop EV charging infrastructure independently, Sugar Land leveraged a partnership model that brought together complementary expertise from multiple organizations:

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BTCP provides the hardware as an experienced American OEM with extensive public charging experience. BTCP offers design consultation, installation support, and long-term service partnerships.

OnPoint EV Solutions

OnPoint EV serves as the charge point operator (CPO), founded in 2023 with substantial resources and a focus on public charging infrastructure. OnPoint EV manages site selection, design coordination, installation oversight, and ongoing operations.

OnPoint EV brought substantial resources and focus to public charging infrastructure, while BTCP's extensive experience working with early adopters, including the largest CPO's in the US, as well as newer market entrants, made it an ideal partner for guiding this emerging CPO through the complex development process.

Smart Management Systems via backend software monitor charging sessions and prevents space abuse through automated notifications and premium pricing for extended parking.

This collaborative approach addresses one of the key challenges in EV infrastructure development: the complexity of coordinating multiple specialties required for successful installations.

Strategic Site Selection and Configuration

The Sugar Land project demonstrates thoughtful site selection that serves multiple user types and maximizes infrastructure utilization:

Sugar Land Airport Installation

- 4 Level 3 DC fast chargers
- Strategic location serving rental car companies (i.e. Avis, Hertz, and Enterprise)
- Fills 15–20-mile radius gap in DC fast charging availability
- Serves both rental car fleet operations and travelers

Renderings of Sugar Land Airport from OnPoint EV Solutions and Sugar Land TX

Recreation Center Installation

The recreation center plan initially called for Level 2 charging ports, but community planners decided to upgrade to DC fast charging after recognizing the site's strategic location on a busy intersection with high traffic flow. This change optimized the installation for vehicles cycling in and out rather than extended parking, allowing park visitors to charge their vehicles in 30 minutes while still enjoying the recreational facilities.

- 2 dual-port DC fast chargers (4 total charging ports)
- Located on a busy intersection to maximize utilization

Both installations incorporate forward-thinking design with built-in expansion capability. Sites were assessed and configured to accommodate additional charging stations as demand grows, ensuring the infrastructure can scale efficiently without requiring complete redesign or reconstruction.

Economic Benefits for Site Partners

The Sugar Land installations demonstrate the revenue potential for site hosts beyond direct charging fees. While traditional gas station customers spend an average of 7 minutes on-site, EV drivers typically remain 15-30 minutes during charging sessions. This extended dwell time can translate into increased foot traffic and extended time to consider purchases at attached or nearby businesses and convenience stores. This creates additional revenue streams that complement the charging infrastructure investment.

Choice of Provider

After evaluating multiple manufacturers, the City of Sugar Land selected BTCP as its charging equipment provider through OnPoint EV. Key factors in the decision included:

- **American Manufacturing**
  Buy America certification simplifies municipal procurement while supporting domestic manufacturing, critical for government projects. This advantage has become increasingly important as government agencies scrutinize foreign competitors for potential security and reliability concerns.

- **Partnership Approach**
  Direct engagement with BTCP's leadership team and collaborative planning throughout the entire process, from site assessment to commissioning.

- **Proven Reliability**
  Industry-leading 98% uptime across BTCP's national installation base provides reliability assurance for municipal partners.

- **Government Experience**
  Extensive experience working with municipalities and government departments, including rigorous certification processes for government procurement lists.

- **Scalable Solutions**
  Sites designed with expansion capability, allowing for additional charging stations as demand grows.

- **Market Leadership**
  BTCP holds 25-30% market share in public DC charging installations across the United States, demonstrating proven success at scale.

Commercial EV Charger Product Choice

Level 3 DC Fast Chargers

BTCP's Level 3 Split System that combines the Gen 4 Public Dispenser and the Gen 4 360 kW Power Cabinet, ideal for high-traffic public locations like airports and recreation centers. These chargers are fully equipped with the latest industry features for an upgraded user experience that combines speed, convenience, flexibility, and reliability. These systems offer:

- Simultaneous charging in 10 to 15 minutes
- Liquid-cooled cables for 500A continuous charging
- Optional touchscreens for promotional messaging and payment instructions.
- Credit card or RFID payment options
- NEVI/Buy America compliant
- Suitable for government, municipal facilities, and public spaces
- Traffic management software preventing space abuse through automated notifications and premium pricing

Technology Solutions and User Experience

Both installations incorporate advanced features designed to optimize utilization and user experience. Smart management systems monitor charging sessions and prevent space abuse through automated notifications and premium pricing for extended parking. Sites are designed with expansion capability, and strategic placement takes into account existing electrical infrastructure, security, convenience, and traffic patterns.

Implementation Timeline and Process

The Sugar Land project demonstrates efficient execution with the right partnerships. The process involves site assessment, design-phase collaboration between OnPoint EV's engineering team and BTCP's technical specifications, coordinated installation, and comprehensive commissioning. Timeline averages approximately six months from concept to operation, depending on site-specific factors.

Conclusion:
A Model for Municipal EV Infrastructure Development

The Sugar Land project demonstrates how municipalities can successfully address EV charging infrastructure gaps through strategic partnerships with experienced CPOs and American OEM manufacturers. Sugar Land created a sustainable model for community-focused EV infrastructure that serves both local needs and regional travel requirements.

This partnership approach offers a blueprint for other municipalities seeking to develop EV charging infrastructure while managing complexity and ensuring long-term reliability. The combination of Buy America-certified equipment, experienced partners, and strategic site selection creates a foundation for sustainable EV infrastructure growth in communities nationwide.

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