



Build a Smarter, More Flexible, Scalable and Cost Effective Electric Vehicle Charging Infrastructure With SynCells

As adoption of environmentally friendly electric vehicles (EVs) continues to grow, real estate developers and municipalities are challenged with adding EV charging stations and supporting infrastructure to parking garages, lots, and similar areas. Some U.S. cities now have building codes that mandate at least 5% of parking spots in new construction be enabled for EV charging, while up to 25% must be EV charging-ready to support the future needs of tenants and building management. New construction of smart buildings, in particular, is driving the demand for EV charging infrastructure, which adds complexity to development and operating costs incurred from increased demand charges and charger support.

SynCells has a simpler and more flexible, cost-effective, and strategic solution to meet these new building codes: providing EV charging as a smart, integrated solution with a unified app, which can be combined with an energy and technology platform as part of a smart, converged strategy for the benefit of all — users, owners, and the environment.

Why SynCells for EV Charging Stations?

Now you can reduce both CapEx and OpEx for EV charging. All you need is SynCells. In addition to being more flexible, SynCells EV charging can be leveraged as a platform to support other pay-for-use and information services related to the site or developer portfolio.



Partnering with SynCells reduces upfront infrastructure cost and complexity by integrating EV charging with your building's energy generation, storage, and management. Since our scalable, flexible, modular energy and technology platform gives you control over your building's power resources, you can add, remove, or upgrade EV charging capabilities as needed.

SynCells can also provide charging options for those living in apartment buildings that predate building codes and now require EV charging as well as those who typically park on the street and must rely on fast charging at public stations. SynCells' systems make it possible to deploy up to 10 times the number of charging stations for the same cost of conventional stations. Plus, owing to their small size, the stations can also be installed in more diverse locations, such as attaching to light poles and other existing infrastructure.

Here are just a few ways that SynCells enables smart, cost-effective, and flexible infrastructure for EV charging:

- **Cost-effective EV charging infrastructure:** SynCells' EV chargers are 10-20% of the cost compared to conventional charging station options. They further reduce costs by supporting high-power DC charging natively with no transformation losses or additional expense. Plus, SynCells minimizes demand charge utility costs by giving you options to generate and store your own energy on site. All of this can be delivered as a service if desired to reduce upfront costs.

- **Flexible charging levels and power distribution:** Choose from three levels of charging to meet your goals, requirements, and budget, from basic power to DC fast charging. Our smart EV solutions can control standard outlets for charging scooters and other light EVs, while larger switchgear supports charging of large trucks. Power can be distributed on site using traditional AC or DC, along with supercharging capabilities. In some circumstances, campus electrical work can be avoided because SynCells power modules can be brought to the vehicle for charging purposes via autonomous robotics, as opposed to adding or modifying hard-wired charging stations.
- **More location options:** SynCells' solution for EV charging allows for 10 times the number of charging stations to potentially be deployed for the same cost as conventional stations. Because of their compact size, SynCells energy modules can also be leveraged, supporting charging and power needs in more diverse locations, such as street-side light poles for publicly accessible charging. What's more, you can customize EV charging sites with your own branding and graphics to promote other building amenities.
- **Vehicle agnostic:** SynCells' EV solution is also vehicle agnostic and supports charging of Tesla, European, and most Asian manufactured vehicles.
- **Convenient mobile app:** With SynCells, users or tenants can use a mobile app to activate vehicle charging stations, parking garage access, and parking payment and to provide visitors with parking access.
- **Smart charging rates:** Charging rates can be throttled to avoid demand spikes, react to utility DR events, and balance available capacity.
- **Seamless integration with SynCells' hyperconverged smart energy platform:** Want to eliminate the need to build out additional power infrastructure for EV charging stations? Simply integrate SynCells' EV charging solutions with SynCells' energy and technology platform for smart buildings. Now you can generate and store your own energy for EV charging and even support V2G capabilities with compatible vehicles.

- **Portfolio solution:** Chargers can be managed by building or across a portfolio, even across countries. This simplifies branding strategies, rates, support, energy strategies, and more. Usage information and site data are directly available to owners for better insights and utilization of resources, even beyond EV charging.
- **Fleet support:** Issue fleet codes to simplify billing reconciliation for EV charging for users of fleet vehicles. One-time codes can be issued for service vehicles and guests.
- **Connectivity and data security:** From ethernet to Wi-Fi and cellular, SynCells offers many connectivity options. As cybersecurity is paramount, traffic is tunneled to resources for protection, allowing traditional building networks and services to be used more efficiently and at a lower cost.



The Most Flexible EV Charging Options

SynCells' solutions for EVs are available in three different power levels to accommodate specific EV charging needs. Our technical experts can help you make the right choice from the following options:

Level 1 — Best for Homes

Consisting of a smart electrical outlet, Level 1 is a basic, low-power solution that provides slow charging capability and is typically only used in residences where Level 2 upgrades are cost prohibitive. These are compatible with the portable EVSE charger that comes with the vehicle.

SynCells Charging Overview			
	Level 1	Level 2	“Level 3”/DC Fast Charge (DCFC)
Applications	Home Charging; Top Up	Home/Commercial Charging; Overnight	Retail/Commercial/Industrial; Rapid
Charging Power	1.5kW	8-11kW	25kW - 1MW+
Time to Charge¹	33+ hrs.	~5hrs.	1hr. (100kW charger)
Charging Speed²	6 miles/hr.	38 miles/hr.	400 miles/hr. (100kW charger)
Vehicle Electrical Interface	NEMA 5-20R	NEMA 14-50R; SAE J1772 (J-plug)	Combined Charging System (CCS)
Cord Length	n/a	25'/7.5m	25'/7.5m
Input Power	120V, 20A	208-277V, 50A, 1 ϕ	380-1000VDC; 480VAC, 3 ϕ (current based on rating)
Charge/Load Management	On/Off	Variable	Variable
Demand Response Capable	Yes	Yes	Yes
Vehicle to Grid (V2G)	Yes (dependent on vehicle capabilities)		
Connectivity	Wi-Fi, Z-Wave, Zigbee	Ethernet, Wi-Fi, LTE, Z-Wave, Zigbee	Ethernet, Wi-Fi, LTE, Z-Wave, Zigbee
Station Enclosure Rating	Type 3R		Site Specific
Indicators	Charger Online, Charging, Fault		
User Interface	SynGrid App for control, billing		
Site Owner Interface	SynGrid Portal for management, billing		
Certifications	UL916, UL2594, UL2231-1, UL2231-2		Site Specific
Billing Increments	Site owner specific, 5-15 min typical		

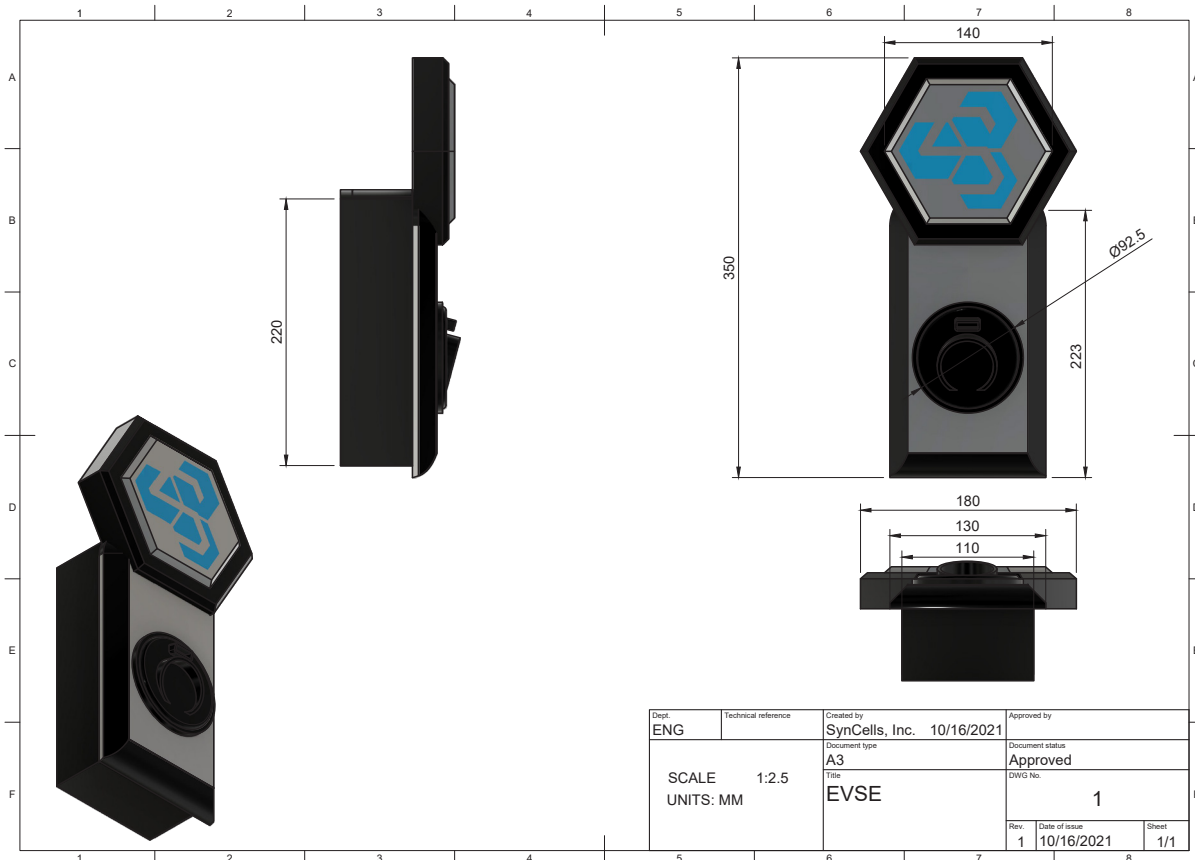
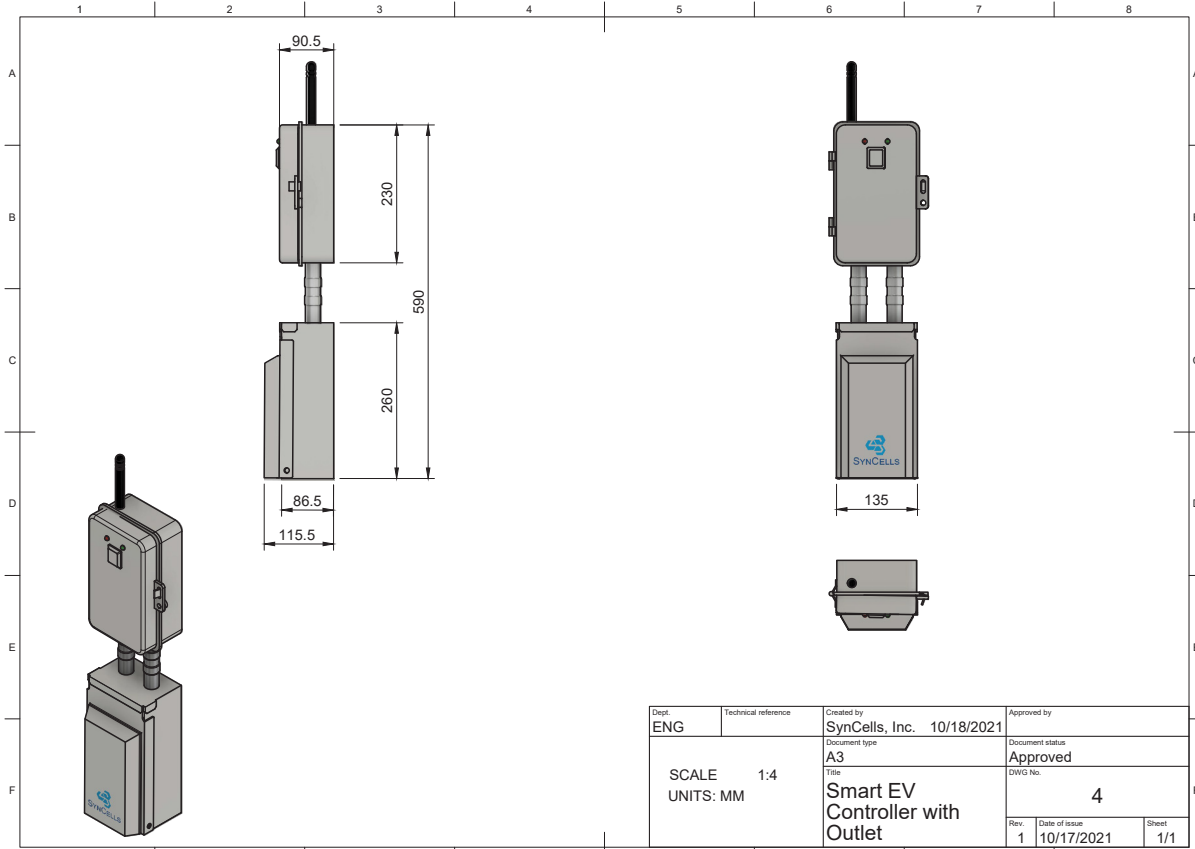
- Notes: 1. Based on 50kWh charge, median rate unless otherwise noted;
2. Assumes EV efficiency of 4mi/kWh;

Level 2 — Best for Work Spaces and Multifamily Residences

This charging solution is typically used in private locations such as homes, offices, and associated parking garages. Typically a NEMA 14-50 smart electrical outlet is provided; this works with Tesla and other higher-powered portable EVSEs. Level 2 charging is intended for vehicles that will be parked for several or more hours, such as while owners are at work or overnight. Either a stationary charger (EVSE) or corded device can be used.

Level 3 — Best for Public Places, Retail, and Business (DC Fast Charging)

As the fastest and most robust charging solution, DC fast charging uses proprietary charging equipment to deliver DC directly to the EV battery, bypassing the onboard charger. Typically delivering 50-150kW of power, the standard can also support 350kW and more. Level 3 is an ideal solution for public/retail/highway locations serving drivers who need to charge their EV quickly and be on their way.



Virtual Grid

Using SynCells' patented technology, owners can leverage their remote energy assets to charge their vehicle. If you have solar and/or storage managed by SynCells technology and connected to the electrical grid, you can use that resource to deliver power to the grid. As you are the generating resource, you don't have to pay for the electricity to be generated, thereby lowering your cost and potentially making the process even more sustainable. This concept applies to many applications, whether charging an EV or powering a portfolio of buildings, as a means to automatically and dynamically balance supply and demand while offsetting demand charges or leveraging your resources for ancillary grid services and revenue opportunities.

Beyond Electric Vehicles

SynCells is changing how energy and technology solutions are delivered to customers. Our platform revolutionizes how energy is produced, stored, and managed, giving individuals and business owners more control over their infrastructure by letting them choose where and how they deploy it to maximize financial return or outsource capabilities. The company represents the evolution of energy and technology convergence, providing a unique platform and range of services that decrease costs and carbon footprint while maximizing performance, security, resiliency, and flexibility.

SynCells meets the challenges of today's energy requirements with a modular, scalable, environmentally sustainable, and lower-cost energy and technology platform for commercial and residential buildings, data centers, utilities, and EVs. Buy and manage your own plug-and-play modular SynCells energy platform, or let us deliver it as a turnkey service. Either way, SynCells simplifies the design, implementation, and management of energy systems for reduced upfront capital costs, lower carbon footprint, and a smarter user experience.

SynCells services such as the virtual grid technology enabled by SynGrid, a management platform and portal for smart buildings, offer new and unique opportunities. Individuals and companies can leverage and monetize their resources as part of an integrated energy management, demand response, energy trading, and smart building/smart city solution. SynCells also provides smart energy and smart technology solutions through its Smart Building as a Service solution and the supporting SynGrid mobile application.

From real estate companies and data centers to property development firms and smart buildings, more and more organizations are turning to SynCells for modular, flexible, and smart EnergyTech solutions to reduce costs, achieve ESG goals, and capitalize on new opportunities.

Learn More About EV Charging With SynCells

Whether you're developing new construction or getting ready to retrofit existing structures, contact SynCells and let us show you how our energy and technology platform can make EV charging infrastructure simpler and more cost-effective to implement. Visit www.syncells.com to learn more, or call us at **844-400-SYNC (7962)** to request a consultation.



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