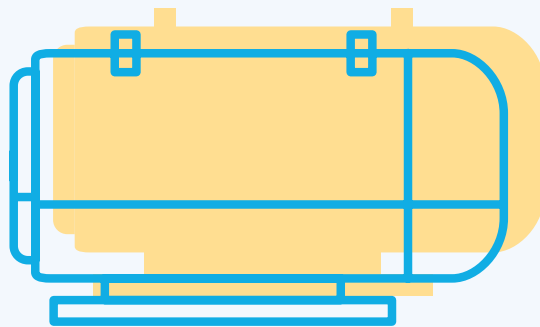


# SYNDRIVE™

NO COMPROMISE



## SYNDRIVE – THE FUTURE OF RENEWABLE ENERGY, DELIVERED AS A SERVICE

**SynDrive™** from SynCells provides a groundbreaking renewable energy solution that integrates unmatched flexibility, sustainability, and performance in one powerful platform. Whether you are seeking utility-scale solutions or mobile power, **SynDrive™** is designed to meet your energy demands with no compromise on reliability or cost-effectiveness.

**SynDrive™** represents the most significant development in power generation technology potentially since the generator was developed. Using a patented switched permanent magnet driver that leverages the stored work potential of permanent magnets combined with a low energy switching capability, the system requires no external energy sources to operate. 24x365 power, no fuel, no emissions, no compromises.

## Key Benefits



**100% Renewable, 24x365** – SynDrive™ ensures continuous, round-the-clock renewable energy, ensuring sustainability at every hour of every day.



**100% Dispatchable** – Adapts to your power needs in real time. SynDrive™ responds based on your specific energy demands to maintain optimal power output.



**100% Self-Sufficient** – SynDrive™ operates independently, requiring no fuel, no external power or energy inputs.



**Recyclable Materials** – Designed with 100% recyclable materials, SynDrive™ offers sustainability across its 20+ year life span.



**Low Heat Generation** – The system generates minimal heat, allowing it to be fully sealed for deployment in harsh or adverse environments.



**High Power Density** – Maximize your energy output with up to 1MW in as little as 0.6m<sup>2</sup> (with stacked configurations, from skid setups to TEU containers).



**Highly Scalable** – Whether vehicle-mounted mobile solutions or large-scale utility applications, SynDrive™ scales effortlessly.



**Lowest Total Cost** – With no upfront capital investment required, you only pay for the kWh used, ensuring minimal financial risk.



**Behind the Meter** – Enhance resiliency with SynDrive™ behind-the-meter deployments, ensuring energy independence and improved energy management.



**Quiet, Clean** – Won't interfere with conversations or neighbors. SynDrive™ operates with no fuel storage, no emissions or runoff risks.



**Flexible Power Output** – Offers a wide variety of power output options, including A/C and D/C configurations.



**High Availability** – Eliminate the need for backup generators, UPS, and associated space, cost, maintenance, noise, and emissions.

## Basis Of Design - AMPD™

The core component of the SynDrive™ is the **Alternating Magnetic Pulse Drive (AMPD) unit**, a breakthrough in magnetic field control that is set to transform the electric motor industry. By dynamically manipulating the orientation of magnets within an array, this innovative concept allows for precise control over magnetic flux distribution. The result is a significant enhancement in motor efficiency, torque, and power density, all while reducing energy consumption and heat generation. SynCells can now design motors that are lighter, more compact, and more powerful than ever before, providing a competitive edge in applications ranging from electric vehicles to industrial machinery.

Conventional permanent magnet motors are coupled with electric coils to create rotation and torque, however the coils require constant current flow and energy consumption. However, the AMPD unit enables the permanent magnetic field to be directly turned on or off and adjusted without the need for continuous electrical input – **the magnetic field of the permanent magnet does the work, not the coils**. This leads to smarter energy usage and prolongs the lifespan of motor components by minimizing wear and tear. The AMPD design also leverages electric pulses and unique materials that allow for rapid switching of the magnetic fields, which is essential in high-performance applications where responsiveness and high motor RPM is desired.

Beyond motors, the benefits of the AMPD unit can extend to a variety of industries. In the medical field, devices like MRI machines can achieve better imaging quality through enhanced magnetic field control. Material handling systems and magnetic levitation trains can leverage this technology for more efficient and controllable magnetic forces, leading to smoother operations and reduced operational costs. HVAC systems can leverage magnetocaloric cooling solutions with significantly reduced energy consumption as compared to current state of the art. Embrace the future of magnetic innovation with SynCell's AMPD and SynDrive™ to unlock new levels of performance across your applications.

## Top Considerations for Purchasing a Renewable Energy Solution

- **Cost and Pricing Structure** – SynDrive™ offers a unique, usage-based pricing model with no upfront capital costs, so you only pay for the power you consume.
- **Energy Output and Capacity** – With SynDrive™, you are guaranteed 100% dispatchable energy, allowing real-time scaling to meet your energy requirements.
- **Supplier Reputation and Reliability** – SynCells is a leading innovator in energy technologies, with expertise in delivering novel solutions.
- **Sustainability Goals and ESG Compliance** – SynDrive™ aligns perfectly with your sustainability goals, offering 100% renewable energy and recyclable materials.
- **Government Incentives and Regulatory Framework** – SynDrive™ solutions are eligible for a wide range of tax credits and incentives.
- **Technological Innovation and Future-Proofing** – SynDrive™ integrates the latest advancements, with future-proof scalability and energy storage options.
- **Risk Mitigation** – High-availability design options and built-in redundancy helps mitigate risks to maximize uptime.
- **Grid Connection and Energy Storage** – Whether connected to the grid or operating independently, SynDrive™ provides seamless energy supply with optional storage.
- **Flexibility and Scalability** – SynDrive™ scales from mobile energy systems to large utility projects, evolving with your business demands.



AMPD unit



## Technical Specifications Overview

<b>Applications</b>	Mobile, Stationary Power
<b>Rating</b>	Continuous Duty
<b>Voltages</b>	AC: 120/240 → 13,800 DC: 380V → 1,500
<b>AC Frequency</b>	50Hz, 60Hz
<b>Cooling</b>	Air-Cooled Sealed Option Available
<b>Energy Storage System</b>	10kWh internal (or per project requirements)
<b>Packaging</b>	<50kW: 0.4m x 0.4m x 0.6m 50-500kW: 1m x 1m x 1.6m >500kW-5MW: ISO 20' Container/Skid equivalent
<b>Power Density</b>	Up to 1MW per 0.6m <sup>2</sup> (stacked units)
<b>Operating Conditions</b>	-40°C → 50°C 45-90% R. Humidity
<b>Controls</b>	Dashboard and BAS connection via IP Closed platform for operator



### Why SynDrive™?

With SynDrive™, you benefit from a truly sustainable, flexible, and cost-efficient energy solution, tailored to your business needs. Whether you require mobile energy or a permanent installation, SynCells offers unparalleled performance and reliability with zero compromise.

### Contact Us Today!

For more information or to discuss how SynDrive™ can meet your energy needs:



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