



ASX Announcement

11 October 2022

Powerhouse Completes Site Acceptance Testing

Melbourne, Australia: Diversified technology design and development growth company, Synertec Corporation Limited (ASX: SOP, "Synertec" or "the Company") is pleased to announce a key development in relation to its Powerhouse technology, a unique proprietary technology that allows the utilisation of renewable energy to power industrial applications in remote locations.

Highlights

- **Positive results from extensive Site Acceptance Testing ('SAT') program with Santos Limited ('Santos', ASX:STO) in remote central Queensland**
- **SAT declared as complete**
- **Powerhouse has been successfully integrated into Santos' operating systems and Santos are now monitoring its real-time performance**
- **The average Powerhouse load under testing has been above site requirements, with peak loads in excess of 10 times typical loads achieved while delivering continuous reliable power supply**
- **Key Synertec modelling has been proven to be within 5-10% of actual performance during SAT, including prediction accuracy of solar irradiance and available energy**
- **Given the positive performance of Powerhouse, cutover of the system to the gas wells has been agreed with Santos and is scheduled to commence in October**
- **The field trial is the final stage of the testing and verification process for Powerhouse**
- **Upon successful field trialling, it is anticipated that commercial production of the Powerhouse units will commence with a staged rollout across selected Santos' brownfield sites to replace fossil-fuelled generators**

Site Acceptance Testing

Powerhouse was installed on Santos' gas well site in remote central Queensland in July this year following completion of extensive Factory Acceptance Testing during Q4 of FY22. During most of Q1 FY23 the Powerhouse System has undergone extensive SAT under varying loads and conditions to determine operational limits and establish the remote control and communication system network, while establishing, performing and documenting routine operating and maintenance procedures.

The performance of the Powerhouse System under SAT conditions has exceeded expectations, with key results including;

- average load under testing in the range of 20-50% above site requirements;
- prediction accuracy of solar irradiance and available energy has been proven to be within 5% of actual performance;
- battery performance has been within Synertec's expectations and supplier's operating recommendations, indicating long and reliable battery life as highly achievable; and
- other key Synertec modelling has been proven to be within 5-10% of actual performance.

Given the positive performance of Powerhouse over a prolonged SAT period, the data reported to Santos by Synertec, and Santos' own daily monitoring of Powerhouse's performance, the cutover to the final field trial phase has been agreed.

Synertec Managing Director, Michael Carroll, commenting on the Powerhouse technology said:

“Powerhouse continues to prove its technical credentials as a reliable and commercial solution to reduce the carbon footprint of remote industrial operations. The performance of the units through an extensive SAT program in remote Queensland has delivered operational performance which exceeded site requirements and proves the accuracy of our modelling and the strength of the artificial intelligence of the system.

“We are progressing Powerhouse to the final stage this month, and we will continue to update the market on the development and further commercialisation of our unique technology.

“We see a significant local and global addressable market for Powerhouse where remote locations operating industrial equipment can benefit from stable continuous base load 100% renewable power supply. As the world transitions to a carbon-free future, technologies such as Powerhouse will enable our customers to achieve their decarbonisation goals.”

Next Steps

Whilst the approval to move to the final field trial phase has been agreed, the timeframe has been delayed by approximately two weeks from the original plan due to Santos’ reprioritising operational resources. The parties are working to identify a suitable operational window for the cutover process. It is anticipated that the cutover process will be completed during October.

The field trial is the final stage of the testing and verification process for Powerhouse.

Key Technical and Operational Milestones

Phase	Estimated Completion	Status
Concept design	Q4 FY21	Complete
Statement of requirements approved	Q1 FY22	Complete
Front End Engineering Design (FEED)	Q2 FY22	Complete
Procurement of key equipment inputs	Q3 FY22	Complete
Detailed design	Q3 FY22	Complete
Beta testing software & load management	Q3 FY22	Complete
Fabrication	Q4 FY22	Complete
Factory Acceptance Testing (FAT)	Q4 FY22	Complete
Commercial terms for prototype agreed	Q4 FY22	Complete
Site Acceptance Testing (SAT)	Q4 FY22	Complete
Field Trial Period commencement	Q2 FY23	In-progress
Commercial terms beyond prototype agreed	H2 FY23	In-progress
Completion/sign-off	H2 FY23	

Santos Agreement

As planned, the parties progressed the MOU to commercial agreement (refer ASX release 12 July 2022), executing on a Santos Goods and Services Contract and Work Order for the current Powerhouse system. Assuming success in the final field trial phase, the parties are now working together to develop an agreed business plan and commercial arrangement for the supply, maintenance and operation of Powerhouse by Synertec to Santos.



Key Benefits of Powerhouse

Key benefits of Powerhouse include:

- Reduced carbon emissions through 100% renewable energy (without requirement for fossil-fuelled backup)
- Flexible and re-deployable infrastructure
- Increased safety and operational efficiency with reduced maintenance and remote operability
- Potential for removal of, and/or reliance upon, mains power connections in remote areas



Figure 1: Powerhouse in operation during site acceptance testing.



Figure 2: Aerial view of the Powerhouse site layout.

-ENDS-

For more information and all media enquiries, please contact:

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This ASX announcement is authorised by the Directors of Synertec Corporation Limited (ASX: SOP).

About Synertec:

Synertec Corporation Ltd (ASX: SOP) is a diversified technology design and development growth company enabling a low carbon future through innovative technology solutions. Commercialising scalable, environmentally friendly and energy efficient technology for global markets in energy, critical infrastructure and advanced manufacturing through innovative partnerships with a portfolio of blue-chip customers, Synertec is proactively participating in the world's transition to a low carbon economy in a practical way for the benefit of future generations.