Datang International Power Generation Company Ltd (Datang Power) operates a landfill-gas-fuelled power station in Xiangtan City, Hunan Province, China. The power station generates electricity using a Guascor gas engine. Datang Power was using the lubricant recommended by the manufacturer and changing the oil every 700 hours.

The company was keen to help its employees to learn more about engine lubrication, so asked for support from the Shell technical team. Shell held a seminar for Datang Power that covered topics including choosing the right oil, the implications of ash content in gas engine oil, setting the correct oil-drain interval and the importance of oil tests.

Shell also offered the Shell LubeAdvisor technical support service and the Shell LubeAnalyst oil condition monitoring service, and performed oil tests to enable Datang Power to determine the appropriate oil-drain interval for the gas engine. Shell also recommended that Datang Power should switch to Shell Mysella S3 S, a medium-ash oil for stationary gas engines.

After changing to Shell Mysella S3 S, Datang Power has extended the gas engine’s oil-drain interval to 900 hours and reduced its oil consumption. As a result, the company has reported total annual savings of US$5,729.

*Shell Mysella S3 S is the new name for the Shell lubricant previously known as Shell Mysella MA.
Shell Mysella S3 S is a high-performance oil for use in spark-ignition, four-stroke engines that require a medium-ash oil or that are fuelled by sour gases such as landfill gas, biogas or sewage gas. It is also suitable for engines that traditionally require a medium-ash oil to protect the valve seating area of the cylinder head.

Shell Mysella S3 S satisfies the requirements of the new generation of stationary gas engines designed to meet legislation that limits NOx emissions, and those that employ the latest lean or clean-burn technology.

**Applications**
- Spark-ignition gas engines fuelled by natural gas requiring a medium-ash oil
- Engines fuelled by sour gases
- Dual-fuel gas engines ignited using a diesel pilot fuel

**Performance features and benefits**
- Extended oil life. Shell Mysella S3 S significantly prolongs oil life by resisting oxidation and nitration. The high total base number (TBN) neutralises acids and provides corrosion protection, even when sour gases are used.
- Engine protection. Shell Mysella S3 S is formulated with an optimised level of ash components, which helps to prolong the life of valves in engines that require a medium-ash oil.
- With a maximum phosphorus content of 300 ppm, Shell Mysella S3 S is compatible with engines equipped with emission catalysts.

**Specifications, approvals and recommendations**
Shell Mysella S3 S is suitable for use in engine types where a medium-ash oil is required. Shell Mysella S3 S is approved by GE-Jenbacher: Series 2, 3 Fuel Class B and C and CAT; MAN B&W Diesel: gas engines (natural gas, landfill gas/digester gas/biogas), dual fuel (pilot diesel); MAN: 3271-4, MDE: naturally aspirated 28xx, 30xx (D/M), turbocharged 28xx, 30xx (T/L/Z); Mhi: Mitsubishi Gas Engines; Rolls-Royce: KG-1, KG-2, KG-3 (biogas operation); Waukesha: cogen application (pipeline quality natural gas); and Wärtsilä: CR26.

For engines under warranty, Shell advises contacting the engine manufacturer and your Shell representative before using the oil.

<table>
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**VALUE**
As a result of the extended oil-drain interval and reduced oil consumption, the company has reported total annual savings of US$5,729.

*The savings indicated are specific to the calculation date and mentioned site. These calculations may vary from site to site and from time to time, depending on, for example, the application, the operating conditions, the current products being used, the condition of the equipment and the maintenance practices.*