inmarsat
The mobile satellite company

IsatData Pro benefits

1 Highly reliable global coverage

2 Low cost technology optimised for M2M

3 Easy to install, with low power consumption for long-term operation

4 Flexible device options for software and system integrators

5 Easy to schedule event-based or planned messaging

IsatData Pro prevents fuel theft in the Energy Market

IsatData Pro satellite connectivity enables fuel theft-detection solution for remote peat harvesting sites across Ireland.

IsatData Pro, together with Oilguard 9000 from Sentinel Fuels, provided Bord Na Mona a reliable and robust solution to monitor and manage fuel storage tanks at their remote peat farming installations, promoting operational efficiency and driving down theft of fuel.

Ireland-based Sentinel Fuel Products is the market leader in diesel oil theft detection and prevention solutions. Established in 2008, the company designs and manufactures fuel management and fuel tank alarm systems.

Sentinel Fuel Products was approached to develop a solution for Irish utility service provider Bord Na Móna (BNM), which has been losing vast amounts of fuel a year through fuel theft from its remote peat harvesting sites.

The company provided BNM with its Oilguard9000 system combined with IsatData Pro to guarantee near real-time connectivity from locations outside GSM coverage.
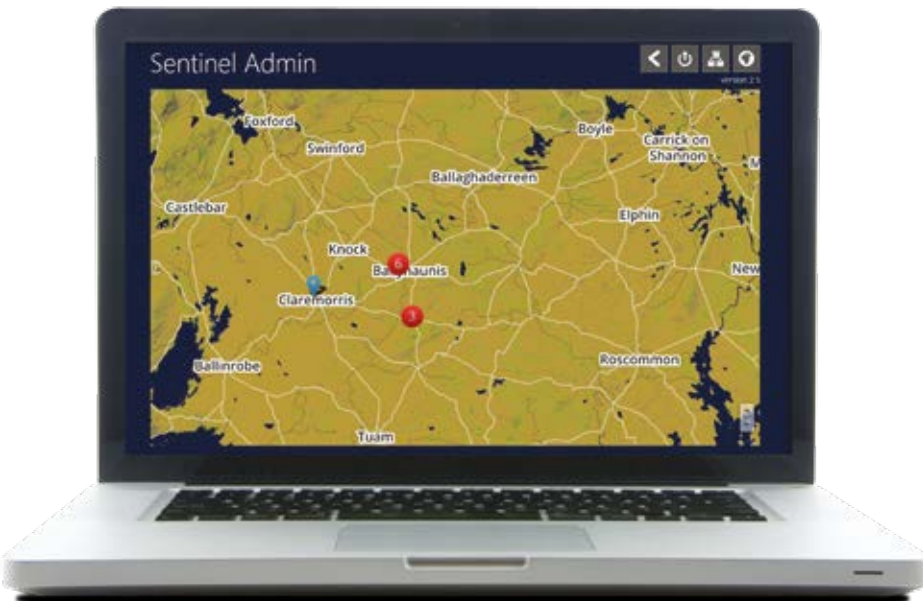
Oilguard 9000
www.sentinelfuelproducts.com

"We have installed Oilguard9000 across numerous sites. It is a very reliable and durable product and means that our client's fuel is managed properly and protected from theft, which is hugely important. We highly recommend installing Sentinel Fuel Products' Oilguard9000."
Hugh Moody, Momentum Support for BNM

Sentinel
Fuel Products©

The problem

With numerous unmanned sites dotted across unpopulated areas of the countryside, BNM has been plagued with thefts from fuel tanks. Traditional solutions like video security cameras, perimeter fencing and local alarm systems had failed to resolve the problem because the locations are so remote – and the company also recognised there was potential for fuel to be stolen without detection.

The on-site fuel reserves are needed to enable heavy peat harvesting machinery to operate 24/7 over large areas. This involves managing a delivery pipeline of fixed bulk storage tanks, mobile transportation, rail and road tanks and a large number of local remote dispensing tanks. To ensure reliable inventory management and delivery across its operation, BNM required precise readings of the fuel level in all storage tanks on all its sites. Without this data, it ran the risk of machinery and operators sitting idle while they waited for fuel.

The solution

Oilguard9000 with IsatData Pro gives BNM reliable data communication between fuel storage tanks and its monitoring station through instant alerts.

A comprehensive suite of management reports allows accurate management control of all critical data, such as number of litres available in each tank, verification of amount of fuel delivered, and amount of fuel consumed.

Alarms are triggered for theft, water detection, overfill, low level (prompting automatic reordering) and spillage – a function BNM was particularly keen on as environmental protection is a key remit for the company. Spillage can occur when tanks are accidentally overfilled and also when thieves cut pipes, leaving the fuel residue to seep into the ground.

The data – collected from a single probe inserted in the tank - can be communicated using the Sentinel Remote software platform via GPS and GPRS, but with many sites lying outside 3M and terrestrial coverage areas, BNM needed a global connectivity solution.

By partnering with energy infrastructure M2M satellite service provider Rencos, Sentinel Fuel Products was able to deliver a solution that gives BNM a near real-time, reliable connection with all its sites.

IsatData Pro is a global low data rate satellite service for machine-to-machine communication. One of a range of Inmarsat M2M solutions, the two-way short message service is ideal for remote management of fixed assets including tracking and telemetry.

With IsatData Pro, companies achieve increased visibility of business operations, enhanced efficiency, and greater safety and security for their assets and staff – all while lowering operational costs.

The SkyWave IDP 680 satellite terminal was selected for its compatibility with Oilguard9000 power and RS232 port connectivity and ease of integration into the web-based reporting application. Its robust environmentally-sealed enclosure keeps it protected on-site.

Delivered via Inmarsat's award-winning I-4 satellite network, which offers 99.9 per cent availability, IsatData Pro allows near real-time data communication of up to 6,400 / 10,000 bytes (send / receive).

The outcome

BNM is delighted with the results it has seen since the Oilguard9000 system was installed. Key benefits have included:

> An attempted fuel theft was detected, BNM's security contractor Momentum Support were alerted and deployed

> Logistics operating efficiencies improved dramatically

> Stock outages were eliminated

> Inventory management and control of fuel cost improved

> Fully automated record system for all aspects of fuel use established

> Better accuracy has led to improved bulk fuel purchase price

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