

The History of Kerosene

Bev Cline sheds some light on the oil that sparked an economic and cultural revolution

ATTENDING SCIENTIFIC meetings was a popular pastime for urban 19th-century North Americans eager to explore the future.

Yet, on a summer's evening in 1846, the standing-room-only crowd at the Charlottetown, Prince Edward Island lecture had no idea they were witnessing a demonstration that would revolutionize artificial illumination around the world.

That evening, by distilling coal, geologist and medical doctor, Abraham Gesner, was able to produce a clear fluid. When placed into an oil lamp with an absorbent wick, it gave off a beautiful, pale yellow flame. He named the fluid kerosene, a contraction of the Greek *keroselaion* meaning wax oil.

Neither Gesner, let alone his audience, could have foretold the significance of his discovery. Kerosene — also known as coal oil or paraffin oil — would spark a global technological, economic and cultural revolution.

In mid-1850s North America, gas lighting was used in many public venues and in the homes of the wealthy. However, it was beyond the economic reach of the majority of citizens.

Most homes relied on lamps fuelled by fat or by innovations such as camphene, also known as burning fluid, since it left many a person with singed eyebrows or far worse injuries. Whale oil was also frequently used, however, it went rancid when stored and smelled foul. It was increasingly scarce too and therefore, wildly expensive, commanding prices that often reached upwards of \$2 a gallon.

Initially, kerosene was too expensive. But when research showed that kerosene could also be refined from petroleum, it set off what can only be regarded as one of the world's most dramatic races — the global search for oil — and ushered in the era of petroleum.

Overnight, it seemed, oil wells, with refineries located nearby — it's estimated there were close to 30

refineries producing kerosene in the US by 1860 — sprung up in areas such as Northwestern Pennsylvania and Southwestern Ontario. At 30 cents a gallon, kerosene became an inexpensive commodity.

With the introduction of clean-burning kerosene lamps in the late 1850s, these portable lamps became the most sought-after lighting method.

During the latter half of the 19th century, kerosene lamps were used almost everywhere people



Kerosene oil would revolutionize artificial illumination the world over and help to spark the lucrative petroleum industry.

gathered — homes, retail establishments, civic and medical offices, pharmacies, hospitals and factories.

For a time, it became the fuel of choice for the police's portable lighting; provided indoor lighting, headlamps and signalling devices for trains; lit ships' lanterns, driving lamps for early automobiles, street lamps and lighthouses. Kerosene stoves and heaters became ubiquitous in rural kitchens. Farmers working outside were able to extend their hours, increasing their yield. When a kerosene lamp was accidentally tipped over onto a soiled tablecloth in France, the oil's cleaning properties were discovered and the dry cleaning industry was born.

The public flocked to social and cultural events lit by kerosene lamps. Evening activities, such as reading and attending meetings,

became possible and fashionable as North Americans no longer had to rely on flickering candles, sputtering lamps or firelight. Even the virtue of kerosene in killing head lice was extolled.

Gesner, son of an American who backed the British in the American War of Independence and subsequently relocated to Nova Scotia, was forced to look to the US to gain financial support for the marketing of his new product. He moved to New York State. In

1854, backed by a group of wealthy US investors, he became one of the founders of the North American Kerosene Gas Light Company, which later formed the core of Standard Oil/Imperial Oil.

As with all technology, one invention can often supersede another in terms of public demand. With the development by Thomas Edison of a reliable, commercially viable electric light bulb in 1879, kerosene slowly began to take a backseat to electricity. However, in some rural communities, kerosene lamps were in use until the 1940s.

Today, especially in North America, kerosene is often viewed with nostalgia; a reminder of the "good old days". In stark contrast, in developing countries, such as Nigeria, an estimated 90 percent of homes still depend on kerosene for cooking, indoor lighting and heating.

Still, in the 21st century, we can look ahead to the promise that kerosene holds for our future.

A component of jet fuel, kerosene powers the airline industry. Kerosene, which once fuelled some of the engines of the Saturn V rocket, is again being evaluated by NASA in its Next-Generation Launch Technology program as a possible fuel for its new engines.

Perhaps taking its cue from the Far East, where relief workers supplied kerosene lamps to victims of the tsunami, the US is showing interest in kerosene for home lighting in times of emergency. 