



**EXPANDER ENERGY INC.**  
INNOVATIVE ENERGY SOLUTIONS

## NEWS RELEASE

### **New Patent Revolutionary for Heavy Oil and Bitumen Upgrading**

*Eliminates Petcoke; 50% Decrease in CO<sub>2</sub> Emissions; 58% Increase in Yield*

**Calgary, AB (May 29, 2013)** – Expander Energy today announces it has been awarded Canadian Patent No. 2737872 for its innovative clean tech process for partial/full upgrading of heavy oil and bitumen. The patented process has robust commercial applications in upgrading and refining facilities worldwide.

Expander's FTCrude® process involves the manufacturing of high performance, ultra-clean burning synthetic fuels: synthetic crude oil, SynDiesel® and SynJet® fuel from heavy oil and bitumen residuals.

The FTCrude® patent process is revolutionary as it significantly reduces CO<sub>2</sub> emissions in the production of heavy oil and bitumen. **This process can make a sizeable contribution to the 2020 climate change commitment targets set by Alberta and Canada for the reduction of GHG (greenhouse gas) emissions.**

Expander's FTCrude® process enhances existing gasification and Fischer-Tropsch technology by managing and retaining carbon within the system, thereby eliminating low value by-products of petcoke and heavy oil residuals. CO<sub>2</sub> emissions are reduced by more than 50%. Production yield is increased to over 130% compared to conventional coking yields of 82%. In the process, carbon is turned into high quality fuel instead of being stored as petcoke or released into the atmosphere as CO<sub>2</sub> emissions. An additional useful by-product is industrial grade process water.

“The FTCrude® process is all about Carbon Management; maximizing the retention of carbon in the process, maximizing the conversion of retained carbon into valuable refined products, thus minimizing the carbon rejection of CO<sub>2</sub> and eliminating petcoke,” stated Jim Ross, Expander’s CEO. “If all Alberta upgraders and refiners converted to Expander’s FTCrude® process, 22 million tonnes of CO<sub>2</sub> would be eliminated each year, equivalent to 4.6 million cars being removed from highways. With the dramatic increase in consumption in emerging and developing economies and a diminishing supply of light crude oil globally, our engineered fuels can provide an Alberta solution for both consumers and governments. Clean Tech is just good business for Canada’s energy industry.”

***About Expander Energy***

**Expander Energy is a leading developer and licensor of processes to convert carbon sources into valuable synthetic fuels. Our engineered fuels are ultra-clean burning and complement existing transportation fuel infrastructure and current engine technologies. Our fuels increase production yield, reduce GHG emissions, and are produced from carbon rich materials such as natural gas, biomass, bitumen residuals, petcoke and municipal solid waste. We strive to deliver an alternative, drop in fuel through patented technology to provide economic growth for Alberta and Canada while being environmentally conscious. Expander Energy Inc. is a privately held energy company located in Calgary, Alberta, Canada.**

**James Ross, CEO,**

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