

# THE WALL STREET TRANSCRIPT

Questioning Market Leaders For Long Term Investors

## Energy Quest Inc. (EQST)



WILF OUELLETTE, President, Chief Executive Officer and a Director of Energy Quest Inc., has been a Director since July 1, 2005 and the company's President and Chief Executive Officer since May 5, 2006. Mr. Ouellette has been a Director and the Chief Executive Officer of Syngas Energy Corp., the company's wholly owned subsidiary, since February 2005. He has over 25 years' experience in process combustion. Since 2001 he has worked as a consultant through his own company, Aclade Energy Corp., offering consulting services in the waste to energy industry, developing new projects in the energy sector and marketing the fluidized bed gasifier. Mr. Ouellette has been principally active in the fields of heating, ventilating, air conditioning and process combustion systems since 1965. He also has extensive experience in the development and integration of alternate energy systems. Mr. Ouellette's technical experience encompasses the following areas: instrumentation and control systems design and applications, heating and ventilation equipment systems applications, burner management and flame safe guard systems, combustion processes, burner design and applications, waste gasification processes and air pollution engineering.

**TWST: Please tell us about Energy Quest.**

**Mr. Ouellette:** Energy Quest Inc. is an alternative energy company engaged in the research, development and commercialization of low cost bio-fuel technologies for industry. The two primary technologies of the company include bio-fuel production using gasification and PyStR. PyStR technology is used to make hydrogen and is superior to other technologies as it greatly reduces the cost of hydrogen production.

Energy Quest Inc. was incorporated as a Nevada company on June 20, 1997. It changed its corporate name to Energy Quest Inc. on May 31, 2007. Energy Quest's wholly owned subsidiary, Syngas Energy Corp., was incorporated as a British Columbia company on December 14, 2004, and its principal business involves an integrated gasification production system technology that combines modern gasification with turbine technologies to produce synthetic gas and electricity.

**TWST: What is PyStR?**

**Mr. Ouellette:** PyStR — pronounced "Pie Star" — is a proprietary process that generates near pure hydrogen H<sub>2</sub> from most

any carbonaceous feed stock. PyStR is an acronym for Pyroletic Stream Reforming. The process can directly produce high purity hydrogen from biomass and other carbonaceous feed stocks such as oil sands, coal and petroleum coke.

**TWST: Would you describe how the Energy Quest PyStR technology works?**

**Mr. Ouellette:** The PyStR technology system incorporates a novel, jetting, very high heat transfer direct fuel and sorbent contact reactor which is utilized to steam reform coal, straw, giant cane, wood chips or any other biomass, and chemically separate carbon oxides. The pyrolysis of biomass is accomplished by direct contact between the biomass fuel stock and hot granular calcined lime at moderate pressures. The lime is re-carbonated to limestone, directly producing near pure H<sub>2</sub> and heat for endothermic steam reforming. The resulting limestone stream is then re-circulated and re-calcined (regenerated). Essentially 100% of the CO<sub>2</sub> can be prevented from entering the atmosphere.

The PyStR process involves three innovative steps. In step one, fuel and steam are fed directly into the heat sink of lime sorbent. As the solid fuel pyrolyzes, carbon monoxide and carbon dioxide immediately react with calcium oxide to form limestone while near pure hydrogen exists the reactor vessel along with some excess steam. Step two involves an innovative separation of solids from gases and removal of ash from the process. Step three, or calcination, includes another innovative PyStR process wherein a small portion of produced hydrogen is combusted in air resulting in a near pure nitrogen and water stream as well as a separate near pure carbon dioxide stream produced in an indirect jetting calciner.

**Mr. Ouellette:** The energy of one kilogram of hydrogen, which would be approximately equal to one gallon of gasoline, would require approximately 10 kilograms of waste wood. In other words, 10 kilograms of waste wood will produce one kilogram of hydrogen using the PyStR process.

**TWST: Has this been proven in definitive field tests?**

**Mr. Ouellette:** To date, the PyStR has produced hydrogen by steam reforming biomass fuels, charcoal, wood chips and shredded elephant grass. The PyStR has also achieved very high solids/gas separation efficiencies in an innovative, continuous process without the need for bags or electrostatic precipitation.

*“Energy Quest management’s expertise in bio-fuels has made it a leader in the rapidly growing bio-energy sector. EQ stands to capitalize substantially on its superior technology to create cash flow generating opportunities. This will lead to revenues and profits for the company.”*

The technology produces near pure hydrogen (96%) in a single step process simply by feeding biomass chips into a hot jetting granular lime filled reactor. The biomass is pyrolyzed and steam reformed into hydrogen and oxides of carbon, which immediately react with the lime producing heat to sustain pyrolysis and steam reforming while also forming limestone. A novel gas/solids separator returns the sorbent to an indirect calciner, where the limestone is recalcined (effectively separating out a stream of near pure carbon dioxide) and recirculated back to the reactor as lime. Separate streams of near pure hydrogen and carbon dioxide exit the reactor.

**TWST: What makes this superior to other comparable technologies?**

**Mr. Ouellette:** The technology will significantly reduce hydrogen costs to levels much less than present steam methane reforming methods. The technology can use almost any carbonaceous materials other than methane to produce hydrogen. PyStR can directly produce near pure hydrogen in a single step; it does not require shift catalysts, separation membranes, oxygen separation, catalytic hot and cold shift reactors, pressure swing adsorption towers or liquefaction pressures. Hydrogen embrittlement is avoided altogether by combining pyrolysis with reforming in a direct contact refractory lined vessel. This eliminates the greatest system maintenance cost associated with current conventional technologies. The process also captures any available carbon oxide gases, effectively removing essentially all carbon from the fuel.

**TWST: How much waste matter is required to convert to a useable amount of energy?**

**TWST: What would it cost to build a small H<sub>2</sub> plant and what is the estimated payback period?**

**Mr. Ouellette:** The smallest practical PyStR plant would cost approximately \$800,000. Expected payback time would be three years.

**TWST: What other projects do you have online?**

**Mr. Ouellette:** There are many applications for the PyStR process. We are looking at other projects that use hydrogen and/or carbon dioxide. Besides hydrogen being used in the oil industry for upgrading oil, carbon dioxide is used for CO<sub>2</sub> enhanced oil recovery. The fertilizer industry uses hydrogen for making ammonia. Hydrogen is a main component for making methanol and one day ethanol. Hydrogen can also be used as a fuel for electric power generation.

EQ is also looking at several projects that will use the M2 gasification process to produce electricity and heat. As an example, we have recently signed a Letter of Intent with Willow Industries for a waste wood to electricity power plant.

**TWST: Tell us more about the purpose and potential of the Alberta Tar Sands Project.**

**Mr. Ouellette:** The purpose of the oil sands project would be to supply hydrogen to existing and future oil sands upgrading operations. Energy Quest would use the PyStR process to make hydrogen from waste petroleum coke and low grade bitumen. The existing oil sands companies presently use natural gas to produce hydrogen for their upgrading processes. Using petroleum coke and low grade bitumen instead of natural gas would reduce hydrogen production costs by half.

The potential for the PyStR hydrogen process in the oil sands is huge. For example Syncrude alone produces 500,000 barrels per day of synthetic oil. Each barrel of oil uses approximately 3.5 kilograms of hydrogen for upgrading. Total hydrogen used by Syncrude is 1.75 million kilograms per day. The cost of hydrogen using natural gas feedstock would on average be \$2.50 per kilogram. Syncrude's daily hydrogen cost would be \$4.375 million per day or approximately \$1.5 billion per year.

**TWST: Tell us more about the purpose and potential of the Willow Project.**

**Mr. Ouellette:** The purpose of the Willow project is to produce electricity from waste wood.

Energy Quest Inc. will supply a biomass Wood Waste to Energy 6 megawatt (MW) power plant system at the Willow site. The system is made up of a modern 6 megawatt Modular Biomass Power plant facility that will use an efficient biomass preparation process and advanced modular gasification to generate electricity. The 6 megawatt modular plant will be made up of two 3 megawatt energy modules. Each 3 megawatt module will be self sufficient to run independently or synchronously with the other module making up the 6 megawatt energy system. This concept allows for one 3 megawatt module to be shut down for maintenance while maintaining part of the plant output. Cost of the planned project is \$7.5 million.

A rudimentary pay out time (POT) calculation based on conditions of 2008 and using \$.12 per kilowatt of electricity, 6,000 kilowatts per hour and 8,400 hours per year yielded a POT of two years.

This project will be a template for many more future plants.

**TWST: What is the significance of acquiring the PyStR Hydrogen Technology?**

**Mr. Ouellette:** Having the PyStR process makes it possible for Energy Quest to enter the hydrogen market at a very competitive level. Having a low cost hydrogen opens the doors to large user industries such as ammonia production, methanol production and oil upgrading.

**TWST: What are the key benchmarks Energy Quest is targeting to achieve in 2008?**

**Mr. Ouellette:** Complete work on the PyStR process. Commence the Willow project.

**TWST: When do you expect the PyStR to be in commercial production?**

**Mr. Ouellette:** We expect to have a small commercial plant in operation within the next six months.

**TWST: In summation, why Invest in Energy Quest?**

**Mr. Ouellette:** Energy Quest management's expertise in bio-fuels has made it a leader in the rapidly growing bio-energy sector. EQ stands to capitalize substantially on its superior technology to create cash flow generating opportunities. This will lead to revenues and profits for the company. For example, as mentioned earlier, the company has recently signed a Letter of Intent with Willow Industries to enter into a profitable revenue generating joint venture to convert Willow's wood waste to electrical energy.

**TWST: Thank you**

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