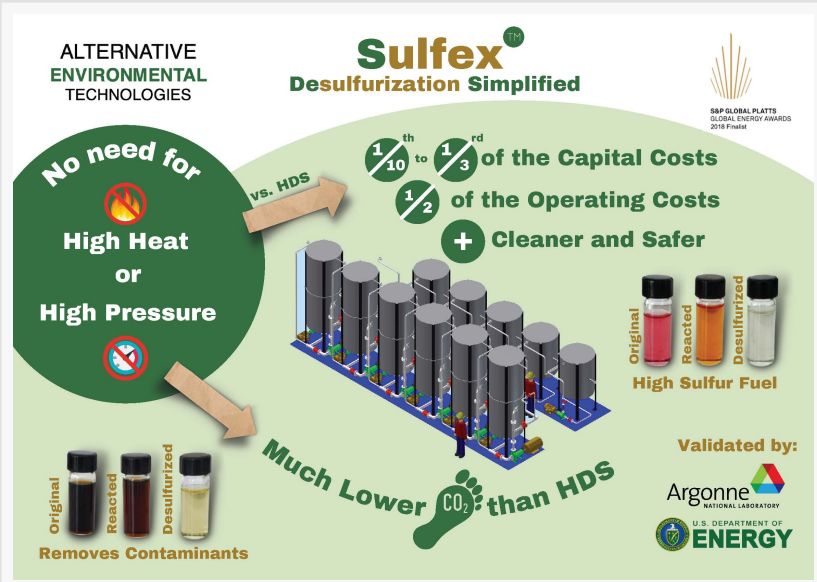


# U.S. Patent Office to Issue the Ninth Patent to AET's Sulfex™ Desulfurization Technology

RENO, NV, U.S.A., June 4, 2024 /EINPresswire.com/ -- [Alternative Environmental Technologies Holdings Corp.](https://www.einpresswire.com/) ("AET") has just been notified of the imminent issuance by the U.S. Patent Office of yet another patent, the ninth patent to issue, directed to its [Sulfex™](#) OXYtreating™ Desulfurization Technology. The allowed patent application provides additional protection to features of the Sulfex® system and further confirms the uniqueness of the Sulfex® technology. AET's OXYtreating™ technology is a unique technology and process of removing sulfur and similar undesirable impurities from distillates. It has three primary benefits over traditional technology.



**ALTERNATIVE ENVIRONMENTAL TECHNOLOGIES**

**Sulfex™**  
Desulfurization Simplified

**No need for High Heat or High Pressure** vs. HDS

**1/10<sup>th</sup> to 1/3<sup>rd</sup> of the Capital Costs**  
**1/2 of the Operating Costs**  
**+ Cleaner and Safer**

**Much Lower CO<sub>2</sub> than HDS**

**Removes Contaminants**

**Original Reacted Desulfurized**  
**High Sulfur Fuel**

**Validated by:**  
**Argonne NATIONAL LABORATORY**  
**U.S. DEPARTMENT OF ENERGY**

SBP GLOBAL PLATTS GLOBAL ENERGY AWARDS 2018 PRIME

AET Sulfex™

It is much safer than the traditionally used hydro-desulfurization ("HDS") processes and plants since Sulfex™ does not use high temperatures and pressures that are typical with HDS. Instead, Sulfex™ removes Sulfur from hydrocarbon fuels at substantially lower and safer temperatures and pressures. It does not use explosive hydrogen nor generate highly toxic hydrogen sulfide gas. And, it is believed that gas flaring will be significantly reduced because of the lowered pressures.

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We feel that this extraordinarily high level interest in the Sulfex™ process validates our early belief in the technology.”

*Paul J. Alar, Managing Director of Green Energy Opportunity SPV, LLC*

The process reduces the CO<sub>2</sub> emissions generated from HDS and supporting processes like steam methane reforming. The CO<sub>2</sub> reduction varies between 70% and 90% for typical applications. For a typical refinery it

reduces the overall carbon footprint by about 25%.

Also, because of the low temperatures and pressures the capital expense for the OXYtreating™

process is about 63-90% less than that of HDS and the operating expense is about half that of HDS. The engineering, procurement and construction time for the process is about half that for HDS because of the simplicity. The OXYtreating™ process does not use exotic, high maintenance precious metal catalysts nor does it utilize troublesome & high maintenance cavitation or ultrasonic process equipment unlike other oxidative desulfurization processes. The Sulfex™ process achieves distillate fuel Sulfur levels of less than 10 ppm, and produces a fuel which is ready for use.

The process has been independently verified by the U.S. Department of Energy's Argonne National Labs ([www.anl.gov](http://www.anl.gov)) with mass and energy balances validated by two major engineering companies and has also been beta tested in Thailand. The first commercial unit of 1000 barrels per day is now being installed in Virginia, USA. The plan is to expand this unit by 4000 to 5000 bpd shortly after commissioning. Discussions with prospects are underway in North America and the Middle East for additional units of up to 10,000 bpd. The intellectual property that is set forth in the allowed patent application further protects features of the Sulfex™ technology. The patent is directed to a system that uses a cross-flow of fuel, reagents and catalysts. Through these features Sulfex™ achieves high rates of desulfurization while minimizing catalyst and reagent use within the system while maximizing the fuel that can be processed by the catalysts and reagents. Further, such a configuration reduces processing time for such fuel processed within the system.

AET's Vice President of Business Development, Barry Dallum, stated "The imminent issuance of our ninth patent concerning the innovative Sulfex™ technology displays our commitment to the advancement of this disruptive technology. This process will help provide low-cost fuels with a lower carbon footprint within a safer operating environment for employees and surrounding communities. The technology has been tested on middle distillate fuels, heavy fuel oils, intermediate streams within oil refineries, pyrolysis oil and distressed solvents with success at reducing contaminants. The first commercial unit is expected to startup by third Quarter, 2024 and we will be showcasing it to interested parties and government officials."

Paul J. Alar, Managing Director of Green Energy Opportunity SPV, LLC, an early investor in AET's Sulfex™ technology commented, "As the first commercial installation of the Sulfex™ unit becomes closer to competition, we have been pleasantly surprised at the overwhelming interest displayed by other potential commercial users, both in the U.S., as well as abroad. We feel that this extraordinarily high level interest in the Sulfex™ process validates our early belief in the technology.

SGS Asset Management Chairman and CEO and AET Executive Director, Steve Stevanovich stated "We are thrilled with the imminent issuance of our 9th Sulfex™ patent and that yet another of our portfolio companies is making great strides in further evolving their technology."

Barry Dallum  
Alternative Environmental Technologies

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