

UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2016

or

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 0-29185

**QS ENERGY, INC.**

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of incorporation or organization)

52-2088326

(I.R.S. Employer Identification No.)

5266 Hollister Avenue, Suite 219

Santa Barbara, CA 93111

(Address, including zip code, of principal executive offices)

(805)-845-3561

(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Exchange Act: None.

Securities registered pursuant to Section 12(g) of the Exchange Act: Common Stock, \$0.001 par value.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes  No

The aggregate market value of the voting and non-voting common equity held by non-affiliates (excluding voting shares held by officers and directors) as of June 30, 2016, was \$30,752,000.

The number of shares of the Registrant's Common Stock outstanding as of March 30, 2017, was 200,226,426.

**DOCUMENTS INCORPORATED BY REFERENCE - None**

Transitional Small Business Disclosure Format (Check one)

Yes  No

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## PART I

### Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements. These forward-looking statements include predictions and statements regarding our future:

- revenues and profits;
- customers;
- research and development expenses and efforts;
- scientific and other third-party test results;
- sales and marketing expenses and efforts;
- liquidity and sufficiency of existing cash;
- technology and products; and
- the effect of recent accounting pronouncements on our financial condition and results of operations.

You can identify these and other forward-looking statements by the use of words such as “may,” “will,” “expects,” “anticipates,” “believes,” “estimates,” “intends,” “project,” “potential,” “forecast” “continues,” “strategies,” or the negative of such terms, or other comparable terminology, and also include statements concerning plans, objectives, goals, strategies and future events or performance.

Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth below under the heading “Risk Factors.” We cannot assure you that we will achieve or accomplish our expectations, beliefs or projections. All forward-looking statements included in this document are based on information available to us on the date hereof. We assume no obligation to update any forward-looking statements.

## Item 1. Business

The discussion of our business is as of the date of filing this report, unless otherwise indicated.

### Overview

QS Energy, Inc. (“QS Energy” or “Company” or “we” or “us” or “our”) develops and commercializes energy efficiency technologies that assist in meeting increasing global energy demands, improving the economics of oil extraction and transport, and reducing greenhouse gas emissions. The Company's intellectual properties include a portfolio of domestic and international patents and patents pending, a substantial portion of which have been developed in conjunction with and exclusively licensed from Temple University of Philadelphia, PA (“Temple”). QS Energy's primary technology is called Applied Oil Technology™ (AOT), a commercial-grade crude oil pipeline transportation flow-assurance product. Engineered specifically to reduce pipeline pressure loss, increase pipeline flow rate and capacity, and reduce shippers' reliance on diluents and drag reducing agents to meet pipeline maximum viscosity requirements, AOT is a 100% solid-state system that reduces crude oil viscosity by applying a high intensity electrical field to crude oil feedstock while in transit. AOT technology delivers reductions in crude oil viscosity and pipeline pressure loss as demonstrated in independent third-party tests performed by the U.S. Department of Energy, the PetroChina Pipeline R&D Center, and ATS RheoSystems, a division of CANNON™, at full-scale test facilities in the U.S. and China, and under commercial operating conditions on one of North America's largest high-volume crude oil pipelines. Recent testing on a commercial crude oil condensate pipeline demonstrated high correlation between laboratory analysis and full-scale AOT operations under commercial operating conditions with onsite measurements and data collected by the pipeline operator on its supervisory control and data acquisition (“SCADA”) system. The AOT product has transitioned from laboratory testing and ongoing research and development to initial production and continued testing in advance of our goal of seeking acceptance and adoption by the midstream pipeline marketplace. We continue to devote the bulk of our efforts to the promotion, design, testing and the commercial manufacturing and operations of our crude oil pipeline products in the upstream and midstream energy sector. We anticipate that these efforts will continue during 2017 and 2018.

Our Company was incorporated on February 18, 1998, as a Nevada Corporation under the name Mandalay Capital Corporation. The Company changed its name to Save the World Air, Inc. on February 11, 1999. Effective August 11, 2015, the Company changed its name to QS Energy, Inc. The name change was effected through a short-form merger pursuant to Section 92A.180 of the Nevada Revised Statutes. Additionally, QS Energy Pool, Inc., a California corporation, was formed as a wholly-owned subsidiary of the Company on July 6, 2015 to serve as a vehicle for the Company to explore, review and consider acquisition opportunities. The Company's common stock is quoted under the symbol “QSEP” on the Over-the-Counter Bulletin Board. More information including the Company's fact sheet, logos and media articles are available at our corporate website, [www.qsenergy.com](http://www.qsenergy.com).

Between 2011 and 2012, the Company transitioned from prototype testing of its AOT technology at the U.S. Department of Energy Rocky Mountain Oilfield Testing Center, Midwest, Wyoming (“RMOTC”), to the design and production of full-scale commercial prototype units. The Company worked in a collaborative engineering environment with multiple energy industry companies to refine the AOT Midstream commercial design to comply with the stringent standards and qualification processes as dictated by independent engineering audit groups and North American industry regulatory bodies. In May 2013, the Company's first commercial prototype unit known as AOT Midstream, was completed.

In 2013, the Company entered into an Equipment Lease/Option to Purchase Agreement (“TransCanada Lease”) with TransCanada Keystone Pipeline, L.P. by its agent TC Oil Pipeline Operations, Inc. (“TransCanada”) which agreed to lease and test the effectiveness of the Company's AOT technology and equipment on one of TransCanada's operating pipelines. As previously reported in our 10-K report filed with the SEC on March 16, 2015, in June 2014, the equipment was accepted by TransCanada and the lease commenced and the first full test of the AOT equipment on the Keystone pipeline was performed in July 2014 by Dr. Rongjia Tao of Temple University, with subsequent testing performed by an independent laboratory, ATS RheoSystems, a division of CANNON™ (“ATS”) in September 2014. Upon review of the July 2014 test results and preliminary report by Dr. Tao, QS Energy and TransCanada mutually agreed that this initial test was flawed due to, among other factors, the short-term nature of the test, the inability to isolate certain independent pipeline operating factors such as fluctuations in upstream pump station pressures, and limitations of the AOT device to produce a sufficient electric field to optimize viscosity reduction. Subsequent testing by ATS in September 2014 demonstrated viscosity reductions of 8% to 23% depending on flow rates and crude oil types in transit. In its summary report, ATS concluded that i) data indicated a decrease in viscosity of crude oil flowing through the TransCanada pipeline due to AOT treatment of the crude oil; and ii) the power supply installed on our equipment would need to be increased to maximize reduction in viscosity and take full advantage of the AOT technology. While more testing is required to establish the commercial efficacy of our AOT technology, we are encouraged by the findings of these field tests performed under commercial operating conditions. The TransCanada Lease was terminated by TransCanada, effective October 15, 2014. Upon termination of the TransCanada Lease, all equipment was uninstalled, returned, inspected and configured for re-deployment.

On July 15, 2014, the Company entered into an Equipment Lease/Option to Purchase Agreement (“Kinder Morgan Lease”) with Kinder Morgan Crude & Condensate, LLC (“Kinder Morgan”) under which Kinder Morgan agreed to lease and test the effectiveness of the Company’s AOT technology and equipment on one of Kinder Morgan’s operating pipelines. Equipment provided under the Lease includes a single AOT Midstream pressure vessel with a maximum flow capacity of 5,000 gallons per minute. The equipment was delivered to Kinder Morgan in December 2014 and installed in March 2015. In April 2015, during pre-start testing, low electrical impedance was measured in the unit, indicating an electrical short. A replacement unit was installed May 2015. The second unit also presented with low impedance when flooded with crude condensate from Kinder Morgan’s pipeline. Subsequent to design modifications, a remanufactured AOT unit was installed and tested at Kinder Morgan’s pipeline facility in August 2015. Initial results were promising, with the unit operating generally as expected. However, voltage dropped as preliminary tests continued, indicating decreased impedance within the AOT pressure vessel. QS Energy personnel and outside consultants performed a series of troubleshooting assessments and determined that, despite modifications made to the AOT, conductive materials present in the crude oil condensate continued to be the root cause of the decreased impedance. Based on these results, QS Energy and Kinder Morgan personnel mutually agreed to hold on final acceptance of equipment under the lease and temporarily suspend in-field testing to provide time to re-test crude oil condensate in a laboratory setting, and thoroughly review and test selected AOT component design and fabrication. Subsequent analysis and testing led to changes in electrical insulation, inlet flow improvements and other component modifications. These design changes were implemented and tested by Industrial Screen and Maintenance (ISM), one of QS Energy’s supply chain partners in Casper, Wyoming. Test performed by ISM at its Wyoming facility indicated significant improvements to system impedance and efficiency of electric field generation.

In February 2016, the modified AOT equipment was installed at Kinder Morgan’s facility. Pre-acceptance testing was performed in April 2016, culminating in more than 24 hours of continuous operations. In-field viscosity measurements and pipeline data collected during this test indicated the AOT equipment operated as expected, resulting in viscosity reductions equivalent to those measured under laboratory conditions. Supervisory Control And Data Acquisition (“SCADA”) pipeline operating data collected by Kinder Morgan during this test indicated a pipeline pressure drop reduction consistent with expectations. Kinder Morgan provided the Company with a number of additional crude oil samples which were tested in the laboratory for future test correlation and operational planning purposes. Based on final analysis of in field test results, SCADA operating data and subsequent analysis of crude oil samples at Temple University, Kinder Morgan and QS Energy are considering moving the AOT test facility to a different, higher-volume pipeline location.

Southern Research Institute (SRI) was engaged by QS Energy in 2015 to investigate the root cause of the crude oil condensate impedance issue by replicating conditions experienced in the field utilizing a laboratory-scaled version of the AOT and crude oil condensate samples provided by Kinder Morgan. In addition, QS Energy retained an industry expert petroleum pipeline engineer to review the AOT design and suggest design modifications to resolve the crude oil condensate impedance issue. This engineer has studied design details, staff reports and forensic photographs of each relevant AOT installation and test. Based on these investigations, specific modifications were proposed to resolve the impedance issue, and improve the overall efficiency of the AOT device, resulting in a new value-engineered design of certain AOT internal components.

The Company is actively seeking new deployments of its AOT technology. In August, 2015, QS Energy was invited to an offshore oil transfer platform in the Gulf of Mexico. This offshore platform was assessed by QS Energy personnel for a potential deployment of the AOT viscosity reduction technology as a solution for super-heavy crude oil flow assurance issues. Following the site visit, subject to non-disclosure agreements executed by all parties, laboratory testing was performed on crude oil samples provided by the operator, which demonstrated significant AOT viscosity reductions. Detailed hydraulic analysis based on laboratory results and pipeline operating parameters was presented to the operator demonstrating potential benefits of AOT technology within the operator’s specified infrastructure. Based on this analysis, the Company was directed by the operator to prepare a preliminary configuration for AOT units optimized for the operator’s high-volume, space-constrained operations. Company engineers and supply chain partners have prepared an optimized configuration and production budget. Based on this optimized configuration, the operator is considering an onsite pilot test with full scale AOT equipment for deployment in 2018 or 2019.

The Company is in discussions with a large Middle Eastern oil company regarding AOT technology in Middle East, having tested multiple oil samples provided by this oil company at Temple University in 2015 and 2016. The most recent round of testing on Middle Eastern oil company samples was completed early 2017, demonstrating AOT viscosity reductions of 20% to 50% in a laboratory setting.

During the third quarter 2016, the Company developed a new onsite testing program designed to accelerate the AOT sales cycle. This program utilizes a fully functional laboratory-scale AOT device designed and developed by the Company in 2015, and tested at the Southern Research Institute. Under this new program, Company engineers will set up a temporary lab at the customer's site to test a full range of crude oils. Fees charged for providing this service will be dependent on scope of services, crude oil sample to be tested, and onsite time requirements. This program has received a positive response from potential customers. In the fourth quarter 2016, the Company entered a contract to provide these onsite testing services to a Canadian oil producer and pipeline operator over a one-week period in early 2017 at a fixed price of \$50,000. This initial test was performed in January 2017; data analysis and final report is expected to be completed in April 2017.

In 2014, the Company began development of a new suite of products based around the new electrical heat system which reduces oil viscosity through a process known as joule heat ("Joule Heat"). The Company is designing and optimizing the Joule Heat technology for the upstream oil transportation market. The Company filed two provisional patents related to the technology's method and apparatus in the second quarter and fourth quarter of 2013, respectively. The first of the two provisional patents was finalized and submitted to non-provisional status on April 29, 2014. The second of the two provisional patents was finalized and submitted to non-provisional status at the end of the third quarter 2014.

In October 2014, QS Energy entered into a Joint Development Agreement with Newfield Exploration Company ("Newfield") to test a prototype of QS Energy Joule Heat equipment, and combined Joule Heat and AOT technology, on a crude oil pipeline serving the Greater Monument Butte oilfield located in the Uintah Basin of Utah. This test of the Joule Heat technology provides ideal conditions to demonstrate efficiency and efficacy. The Uintah Basin is 5,000 to 10,000 feet above sea level with average low winter temperatures of 16°F. Crude oil pumped from the region is highly paraffinic with the consistency of shoe polish at room temperature. Uintah's black wax crude must remain at a minimum of 95°F and yellow wax above 115°F and therefore requires a substantial amount of heat to keep it above its high pour point. Operators in the upstream market often run at temperatures of 140°F to 160°F. Newfield, like many other companies in the region, incurs significant operating expense in the form of fuel and power used to heat the waxy crude and counter the cold climate conditions characteristic of Utah. The Company's first Joule Heat prototype was installed for testing purposes at the Newfield facility in June 2015 and the system is operational; however, changes to the prototype configuration will be required to determine commercial effectiveness of this unit. During the third and fourth quarters of 2015, we worked with Newfield and Dr. Carl Meinhart to modify the prototype configuration based on observed pipeline and Joule Heat operating factors. In addition, QS Energy provided a scaled-down version of the Joule Heat unit for static and flow-through testing at SRI. Testing performed by SRI in September 2015 on a laboratory-scale Joule Heat unit demonstrated the ability of the Joule Heat technology to deliver temperature increases in the laboratory setting.

In 2015, the Company worked in collaboration with Newfield, SRI, Dr. Carl Meinhart, and our manufacturing partner to design and build an AOT prototype unit, for operations in the upstream crude oil pipeline market ("AOT Upstream"), specifically configured for pipeline operating factors observed at Newfield's Utah site. Our original plan was to retrofit an earlier prototype device previously tested at RMOTC; however, after multiple site visits and discussions with Newfield, it was determined a new, smaller unit, specifically optimized for Newfield operations would be more appropriate for this field test opportunity. We plan to jointly test the AOT Upstream prototype unit under typical upstream commercial pipeline conditions on Newfield's pipeline in conjunction with the previously installed Joule Heat unit.

In December 2015, we temporarily suspended Joule Heat and AOT Upstream development activities to focus Company resources on finalizing commercial development of the AOT Midstream. Testing terminated at SRI and all prototype equipment was returned to the Company. We currently plan to resume Joule Heat and AOT Upstream development in 2017 depending on the availability of sufficient capital and other resources.

In July 2015, the Company formed QS Energy Pool, Inc., a wholly owned subsidiary of QS Energy, Inc., for the sole purpose of taking advantage of asset acquisition opportunities in the oil and gas operations market. QS Energy Pool is specifically targeting the acquisition of one or more operating companies or properties with proven positive cash flow, providing operating income and bottom line revenue which are both accretive to and synergistic with QS Energy, Inc.'s current operations. QS Energy has identified multiple attractive opportunities to acquire producing oil and gas field operations. Our strategy is to acquire producing oil and gas fields with production profiles of at least ten years, proven long-term development rights, and demonstrated positive cash flow at commodity prices as low as \$25/barrel of oil and \$2.00/MCF of gas. Any such acquisitions would be subject on our ability to obtain acquisition financing under acceptable terms and conditions. To date, we have not acquired any oil and gas properties, and there can be no assurances that we will do so in the future. We can provide no assurances that acquisition financing would be available to us.

Our expenses to date have been funded primarily through the sale of shares of common stock and convertible debt, as well as proceeds from the exercise of stock purchase warrants and options. We will need to raise substantial additional capital through 2017, and beyond, to fund our sales and marketing efforts, continuing research and development, and certain other expenses, until our revenue base grows sufficiently.

There are significant risks associated with our business, our Company and our stock. See “Risk Factors,” below.

### **Our Business Strategy**

QS Energy intends to continue commercialization and marketing of its current technologies. Our current and primary product portfolio is dedicated to the crude oil production and transportation marketplace, with a specifically-targeted product offering for enhancing the flow-assurance parameters of new and existing pipeline gathering and transmission systems.

Our primary goal is to provide the oil industry with a cost-effective method by which to increase the number of barrels of oil able to be transported per day through the industry’s existing and newly built pipelines. We also seek to provide the oil industry with a way to reduce emissions from operating equipment. We believe our goals are realizable via viscosity reduction using our AOT and Joule Heat product lines.

We believe QS Energy’s technologies will enable the petroleum industry to gain key value advantages boosting profit, while satisfying the needs of regulatory bodies at the same time. In 2014, we installed and operated AOT equipment on one of TransCanada’s North American pipeline, proving our ability to build, deliver and operate our AOT equipment on a high-volume commercial pipeline and key players in the pipeline industry continue to demonstrate strong interest in our technologies.

Our manufacturing strategy is to contract with third-party vendors and suppliers, each with a strong reputation and proven track record in the pipeline industry. These vendors are broken up by product component subcategory, enabling multiple manufacturing capacity redundancies and safeguards to be utilized. In addition, this strategy allows the Company to eliminate the prohibitively high capital expenditures such as costs of building, operating and maintaining its own manufacturing facilities, ratings, personnel and licenses, thereby eliminating unnecessary capital intensity and risk.

Our identified market strategy is to continue meeting with oil and gas industry executives in the upstream, gathering, and midstream sectors from both domestic and foreign companies. Our goal is to introduce our technology to oil and gas companies and to demonstrate potential value for the purposes of negotiating commercial implementation of our AOT technology to their existing infrastructures.

Our strategy includes:

1. Continue optimization and value engineering of our AOT Midstream commercial product line.
2. Expand AOT Midstream field test operations on commercial pipeline operations.
3. Gain clearance from customers’ procurement divisions for expanded installation of AOT Midstream based on field test results.
4. Complete laboratory testing of our Joule Heat product line.
5. Initiate and expand field testing of Joule Heat product on commercial pipeline operations.
6. Commercial deployment of our Joule Heat product line.
7. Publish material events, collaborative arrangements, framework agreements and joint development agreements.
8. Co-Present with customers at various trade conferences in the United States.
9. Continue to make inroads and meet with key strategic potential customers in the following geographic regions:
  - a. Alberta, Canada
  - b. Williston, Bakken Basin, USA
  - c. Niobrara, Denver-Julesberg Basin, USA
  - d. Uinta-Piceanse Basin
  - e. Green River Basin
  - f. Middle East
  - g. Asia
  - h. Australia-Asia
  - i. South America

10. Continue to make inroads and strategic alliances with additional supply chain and logistics support to rapidly expand our production capacity beyond its current physical limitations, adding capacity, reach and stability with pre-approved supply chain members that meet the criteria of the customers' procurement divisions.
11. Further develop additional AOT and Joule Heat product models beyond targeting upstream and gathering energy production and transport sectors.
12. Continue to develop collaboratively additional scientific and technical whitepaper reports, product development enhancements, and additional products with our engineering support, consultants and relationships.

In July 2015, the Company formed QS Energy Pool, Inc., a wholly owned subsidiary of QS Energy, Inc., for the sole purpose of taking advantage of asset acquisition opportunities in the oil and gas operations market. QS Energy Pool is specifically targeting the acquisition of one or more operating companies or properties with proven positive cash flow, providing operating income and bottom line revenue which are both accretive to and synergistic with QS Energy, Inc.'s current operations. QS Energy has identified multiple attractive opportunities to acquire producing oil and gas field operations. Our strategy is to acquire producing oil and gas fields with production profiles of at least ten years, proven long-term development rights, and demonstrated positive cash flow at commodity prices as low as \$25/barrel of oil and \$2.00/MCF of gas. Any such acquisitions would be subject to our ability to obtain acquisition financing under acceptable terms and conditions. We can provide no assurances that such financing would be available to us.

### **Market Analysis Overview**

The energy sector continues to operate in a period of both rapid change and expansion. Due to the relatively recent and widespread adoption of advanced oilfield drilling and completion technologies, known as enhanced oil recovery (EOR) techniques, enormous reserves of "tight" oil and gas are now recoverable from shale formations throughout North America and the world. This historic surge in upstream crude oil production has resulted in costly and persistent transportation bottlenecks when moving upstream production to downstream storage, offloading facilities and refineries. This persistent and severe industrywide problem is stimulating investments in new and existing pipeline infrastructure and a reliance on less desirable alternate forms of transport, including rail and freight truck.

Since the initial use of EOR or tertiary recovery techniques in the 1970s, oil and gas producers have progressively relied more heavily on the application of gas and chemical injection as well as thermal recovery. These extraction techniques, coupled with a much greater number of new wells in active oilfields, has raised the output of reservoirs by 30 to 60 percent above traditional primary and secondary recovery practices. Due to the rapid adoption of advanced extraction technologies throughout the U.S. energy industry, a 34-year decline in domestic oil and gas production was reversed in 2006. Historically high output from massive shale formations such as North Dakota's Bakken, Texas' Eagle Ford and Permian Basin, Colorado's Green River and Utah's Uintah Basin continues to the present day.

Other nations with significant exploitable shale formations include Russia, China, Argentina, Libya, Australia, Venezuela, Mexico and dozens of others, providing a ready market for crude oil pipeline optimization technologies as production comes online. All told, the U.S. Energy Information Administration estimates there to be 345 billion barrels of identified and recoverable shale oil worldwide.

Consequently, oil production greatly exceeds the capacity of existing pipelines in the U.S., Canada and many other regions of the world, often resulting in delivery delays to refineries, as well as reliance on less desirable rail and tanker truck transport.

Recently, the softening of oil prices worldwide has incentivized producers and transporters to reduce costs and seek technologies that can provide greater operational efficiencies. AOT and Joule Heat technologies are specifically designed to increase pipeline capacity, while reducing pipeline operating costs and overhead, thereby increasing margins and delivering measurable competitive advantages.

## **Projected Pipeline Infrastructure Investment**

Among the challenges facing the global crude oil production and transportation sectors, few are as intransigent or detrimental to the industry as the transportation bottlenecks and well-to-market delivery delays that are endemic here in North America and overseas. While new pipeline infrastructure projects are underway here in the U.S., Canada and in foreign markets, gaining legislative approval is a lengthy process and their construction is highly capital-intensive.

Although pipelines are by far the safest and most economical transportation method, outmoded pipeline infrastructure constructed primarily in the 1950s and 1960s cannot provide the capacity necessary to move production downstream to storage, refinery and offloading facilities. Consequently, delivery delays to refineries and reliance on less desirable rail and tanker truck transport have increased exponentially since 2008 when the shale boom began in earnest. Data compiled by the U.S. Energy Information Administration, IHS Global and the American Petroleum Institute identify billions in lost revenue opportunities for E&P companies and tax collection agencies in leading oil producing states such as Texas, North Dakota, Alaska, California, Colorado, Wyoming and Utah directly attributable to production takeaway constraints.

As of 2013, the U.S. and Canadian midstream oil market was serviced by a total of 60,911 miles of crude oil pipelines, up 3,448 miles or 6 percent over 2012 and up 11,647 miles or 23 percent over the past decade. Planned midstream pipeline projects are expected to bring an additional 20,000 miles of pipeline capacity over the 5 to 10 years. However, the bulk of the active pipelines in the U.S. were constructed several decades ago, necessitating enormous capital investments to maintain and update the aging pipeline infrastructure. Studies by research firm IHS Global Inc. estimate that between 2014 and 2020, an average of greater than \$80 billion will be invested annually in U.S. midstream and downstream petroleum infrastructure.

Despite the recently depressed price level of global oil benchmarks, experts forecast continued growth in crude oil pipeline capital expenditures. For example, a study published by GlobalData in February of this year, ‘North America and Russia to Dominate Global Oil and Gas Pipeline Construction by 2018’, estimates that U.S. oil and gas pipeline capital expenditures for new construction will exceed \$500 billion, resulting in the construction of 24,000 miles of new oil and gas pipeline capacity.

QS Energy’s AOT and Joule Heat Technologies are strategically aligned with the major requirements and challenges facing the petroleum pipeline economy.

First, AOT allows the midstream sector to increase capacity while remaining within maximum pressure requirements. The technology can increase capacity for the industry and reduce reliance on truck and train transport, which has often proven inefficient and environmentally hazardous. Second, AOT and Joule Heat help to reduce operating expenses for pipeline operators. These technologies optimize pipeline operating efficiency, which is especially important given the current oil price environment.

Recently, the softening of oil prices worldwide has incentivized producers and transporters to reduce costs and seek technologies that can provide greater operational efficiencies. As noted by industry analysts, the drive to squeeze out better margins began in late 2013 when oil prices fell to the \$100 per barrel mark after a price expansion cycle that had been in place since 2000 (“*Deloitte: Low Oil Prices Creating Need for More Efficient Operations*”, Rigzone.com, February 5, 2015). Capital-intensive extraction techniques necessary for unlocking tight oil and gas have boosted costs across the industry since the shale boom began in earnest in 2008, and today’s low spot prices have caused for upstream and midstream operators to aggressively reduce overhead.

In answer to the energy industry’s pressing challenges, QS Energy is commercializing cost-efficient solutions for increasing the capacity of existing and new pipeline gathering and transmission systems, capable of reducing operational overhead, increasing margins and delivering measurable competitive advantages.

### **Target Markets**

The oil and gas sector market can be segmented into three primary categories: Upstream Producers, Midstream Transporters and Downstream Refiners:

- The Upstream segment is involved in the exploration and production (E&P) of oil and gas.
- Midstream companies and partnerships transport oil and gas to markets via pipelines, rail and shipping, and provide storage in the field and at the destination location.
- The Downstream sector refines oil and gas into finished products and, in cooperation with manufacturers and retailers, markets and distributes fuels and other refined petroleum products.

## **Upstream Producers**

The Upstream segment has the greatest exposure to commodity prices. When prices fall as has been the case recently, they feel the brunt of this realignment. They also have the most to gain from additional flow throughput capacity and therefore would see immediate benefit from QS Energy's AOT and Joule Heat solutions.

This sector is typically nimble and faces few barriers to entry. With clear financial upside for every additional barrel of crude oil that they are able to transport, these companies are often open to new and innovative technology capable of providing greater efficiencies, lower costs and improved cash flow. Upstream producers physically move the most volume of product. They are customers to the Midstream transporters and enter into long-term contractual shipping obligations (tariff-based transportation contracts) with Midstream transporters to secure the movement of product from their fields to the refiners and markets downstream.

Producers make the spot market price for every barrel delivered to refinery, minus the transport costs, tariffs, and marketing discounts associated with bringing the product to market. A rough rule of thumb for this market is that the further away they are from the refinery, the higher the transport costs to deliver the product. Discussions with Upstream entities has uncovered strong interest in solutions that unlock chokepoints from their field equipment to the transmission line loading terminals through viscosity reduction (AOT) and optimizing flow by directly heating feedstock (Joule Heat). In addition, this group would also benefit from transporters implementing our AOT transmission-line series due to its ability to increase the overall flow capacity of pipelines transporting product from loading terminals to market.

Midstream entities transport the bulk of the world's crude oil output via the 400,000 miles of crude oil pipelines globally. Domestically, they deliver a large percentage of the U.S. daily production of 9.2 million barrels per day through 160,000 miles of crude pipelines. Midstream operators represent a strong and ready market for both AOT and Joule Heat, and field test deployments for both solutions are underway.

The pipeline transport operators' business model is to charge a tariff to transport each barrel of oil through their pipeline. Due to the high daily volume of oil being transported and its value as a commodity, even incremental performance efficiencies can drive significant reductions in overhead reduction and increases in toll revenues.

The potential benefits of the AOT and Joule Heat technologies include increased flow, reduced pipeline operating pressure and reduced friction losses and friction-induced heat build-up, providing economic benefits through increased capacity and toll rate income, and regulatory benefits through reductions in BTU per ton-mile, off-gassing and reduced carbon emissions (CO<sub>2</sub>).

## **Midstream Gathering Transporters**

A subset of the Midstream transporters sector is the gathering line operators, this group often functions as a part of the Upstream producers' operations, or within the Midstream transporter's operations. Midstream gathering lines are the regional transportation infrastructure that connect Upstream oilfield gathering lines to Midstream long distance main trunk lines. Typically, these pipelines are of a relatively short length (20-100 miles) and have diameters between 6" and 12", and could benefit from our smaller, lower cost AOT Upstream technology.

## **Downstream Refineries / Offloading Facilities**

The third market category of the industry that can potentially benefit from our technologies consists of downstream refineries and rail, truck and marine offloading facilities. AOT viscosity reduction and Joule Heat technologies have the potential to benefit the Downstream market sector through reduced reliance on chemical based flow assurance additives, reduced friction from turbulent pipelines, reduced volatility, and subsequent evaporation mitigation practices and hardware requirements as mandated by the U.S. Environmental Protection Agency.

## **Our Products and Technology**

### **AOT Commercial Products**

Beginning in the second quarter of 2012, the Company began the design and engineering efforts required to transition from prototype testing to full-scale commercial unit production. The Company established its supply chain, designs, drawings, engineering, certifications and specifications to comply with the engineering audit processes as dictated by the energy industry regulation processes and North American regulatory bodies. We have built, delivered and tested, under limited duration and conditions, AOT equipment on a high-volume commercial pipeline. We have not proven the commercial viability of this product. Please see “ITEM 1A, Risk Factors”, for a discussion associated with the commercial viability of our products.

The first commercial deployment of AOT occurred on the Keystone Pipeline in Udall, Kansas in May 2014, utilizing four AOT pressure vessels in a parallel “4-Pack” configuration for a cumulative capacity of 600,000 barrels per day. This system was operated under normal pipeline operating conditions as reported in the ATS RheoSystems field test summary report dated February 5, 2015. A copy of the ATS summary report is available on the Company website at: <https://wsenergy.box.com/ATS-AOT-SummaryRpt>. See section titled “Laboratory and Scientific Testing” below for more information on test procedures and results. Subsequent to testing and termination of the TransCanada lease, the AOT 4-Pack was uninstalled and reconfigured for deployment as four individual AOT units.

Our second AOT commercial installation was a single AOT deployment initially installed in March 2015 on the Kinder Morgan Crude & Condensate pipeline, which provides takeaway capacity for the Eagle Ford Shale in South Texas, primarily delivering crude oil condensate. Testing and re-engineering of this unit continued through the remainder of 2015, specifically addressing issues experienced treating crude oil condensate, resulting in a value-engineered unit which was delivered to and installed on the Kinder Morgan condensate pipeline in February 2016, with testing scheduled to begin in March 2016.

The Company continues to optimize and value engineer its AOT product line, targeting both Midstream and Upstream markets. In 2016, the Company plans to focus its efforts and resources on finalizing commercialization of the AOT Midstream product line. Development efforts of the AOT Upstream product was temporarily suspended in December 2015. We currently plan to resume AOT Upstream development in the fourth quarter of 2016 depending on the availability of sufficient capital and other resources.

### **Joule Heat Product Development**

The Company began development its Joule Heat product in 2014, based around the new electrical heat system which reduces oil viscosity through a process known as joule heat, specifically targeting the upstream crude oil transportation market. The Company is designing and optimizing the Joule Heat technology for the upstream oil transportation market. The Company’s first Joule Heat prototype was installed for testing purposes under a joint development agreement with Newfield Exploration Company in June 2015 and the system is operational; however, changes to the prototype configuration will be required to determine commercial effectiveness of this unit. In December 2015, we temporarily suspended Joule Heat development activities to focus Company resources on finalizing commercial development of the AOT Midstream. We currently plan to resume Joule Heat development in 2017 depending on the availability of sufficient capital and other resources.

### **AOT Commercial Supply Chain**

The Company has developed a well-established supply chain for fabrication of the commercial AOT and Joule Heat devices. The supply chain consists of multiple component suppliers and manufacturing companies engaged under Independent Contractor Agreements according to their respective fields of expertise. The supply chain entities have been chosen for their ability to work collaboratively with QS Energy and for their existing relationships with current and potential future customers of QS Energy technologies. The external components such as pressure vessels, inlet and outlet piping header systems, personnel and equipment shelters are manufactured under contract with Power Service Inc. with offices in Wyoming, Utah, Colorado, Montana, North Dakota, and Texas. Internal components such as grid packs, electrical connections and other machined parts are manufactured by Industrial Screen and Maintenance, with offices in Wyoming and Colorado. All equipment is manufactured in the United States of America, using only approved raw materials and vendors for quality control and import/export compliance purposes and meet the certifications and specifications as dictated by our customers and their independent oversight and auditing authorities.

Other components such as power systems, electrical junction boxes, cabling, hardware, switches, circuit breakers, computer equipment, sensors, SCADA/PLC, software and other power and integration equipment are purchased as complete units from various suppliers with operations based throughout North America. All component vendors are required to meet or exceed the same specifications as the parts manufacturers to maintain compliance as dictated by our customers and their independent oversight and auditing authorities.

### **AOT Intellectual Property**

The Company began its own independent audit process for the updating of its intellectual property portfolio in 2012. The goal of this process was to streamline unnecessary legacy items left over from prior management, consolidate efforts to countries and regions of interest and retire items that were no longer valid or had been replaced with new intellectual property developments. In 2013, the Company retained the law firm of Jones Walker LLP, with operations based in Houston, Texas and began consolidation and streamlining efforts to manage intellectual properties. Since that time, QS Energy has filed two additional provisional patents related to our technologies' method and apparatus.

QS Energy is currently maintaining and licensing from Temple University a portfolio of domestic and international patents, which have either been granted or have been published and are pending subject to final approval by the respective patent agency. Each of these intellectual properties are related to QS Energy's AOT, Joule Heat and Fuel Injector technologies. The AOT and Joule Heat technologies are being actively developed and marketed by the Company. Active development of QS Energy's fuel injector technology was suspended in 2013, but the Company continues to maintain a license agreement with Temple University with respect to the underlying patents, and is considering its options to re-start commercialization, sublicense the technology, or terminate the fuel injector license agreement with Temple. For details of the licensing agreements with Temple University, see Financial Statements attached hereto, Note 6. Please see ITEM 1A, Risk Factors below for a discussion of risks associated with these intellectual properties.

#### **Summary of QS Energy Patents Granted and Pending**

Description of Patent	Technology	Granted	Pending	Total
Device for Saving Fuel and Reducing Emissions	Fuel Injector	9	5	14
Electric-Field Assisted Fuel Atomization System and Method of Use	Fuel Injector	4	3	7
Method and Apparatus for Treatment of a Fluid	AOT	7	6	13
Increasing Fluidity of a Flowing Fluid	AOT	1	–	1
Electrical Interconnect and Method	AOT, Joule Heat	–	1	1
Joule Heating Apparatus and Method	Joule Heat	–	1	1
Apparatus and Method for Reducing Viscosity	AOT	–	2	2
Method for Reduction for Crude Oil Viscosity	AOT	6	2	8
		<u>27</u>	<u>20</u>	<u>47</u>

A brief description of each of these patents is as follows:

#### *Device for Saving Fuel and Reducing Emissions*

- This patent is related to QS Energy's fuel injector technology.
- Owned by QS Energy.
- A copy of the U.S. patent can be found at <https://www.google.com/patents/US6901917>

#### *Electric-Field Assisted Fuel Atomization System and Method of Use*

- This patent is related to QS Energy's fuel injector technology.
- Owned by Temple University; licensed to QS Energy under an exclusive worldwide license agreement.
- A copy of the published, pending U.S. patent can be found at <https://www.google.com/patents/US20100024783>

*Method and Apparatus for Treatment of a Fluid*

- This patent is related to QS Energy's AOT technology.
- Owned by Temple University; licensed to QS Energy under an exclusive worldwide license agreement.
- A copy of the U.S. patent can be found at <https://www.google.com/patents/US8173023>

*Increasing Fluidity of a Flowing Fluid*

- This patent is related to QS Energy's AOT technology.
- Owned by QS Energy.
- A copy of the U.S. patent can be found at <https://www.google.com/patents/US8616239>

*Electrical Interconnect and Method*

- This patent has applications in both QS Energy's AOT and Joule Heat technologies.
- Owned by QS Energy.
- A copy of the published, pending U.S. application can be found at <https://www.google.com/patents/US20150184887>

*Joule Heating Apparatus and Method*

- This patent is related to QS Energy's Joule Heat technology.
- Owned by QS Energy.
- A copy of the published, pending U.S. application can be found at <https://www.google.com/patents/US20150163858>

*Apparatus and Method for Reducing Viscosity*

- This patent is related to QS Energy's AOT technology.
- Owned by QS Energy.
- A copy of the published, pending U.S. application can be found at <https://www.google.com/patents/US20140318946>

*Method for Reduction for Crude Oil Viscosity*

- This patent is related to QS Energy's AOT technology.
- Owned by Temple University; licensed to QS Energy under an exclusive worldwide license agreement.
- A copy of the U.S. patent can be found at <http://www.google.com/patents/US8156954>

## Current Business Status

We are subject to non-disclosure agreements with national and multi-national upstream and midstream energy production and transportation companies throughout the USA and overseas for evaluation, testing and analysis of our AOT products' value to their systems. The Company has non-disclosure agreements in place with companies located on the following continents:

- North America
- Europe
- Africa
- Asia
- Australia

Many of these companies have further demonstrated interest in our technology by electing to send crude oil samples to Temple University to test the potential efficacy of AOT technology on oils typical to their operations, results of which are used to provide detailed benefits analysis and determine baseline AOT configurations optimized for each company's unique operating conditions. Oil samples tested under these non-disclosure agreements include: African crude oil; refinery fuels; black wax and yellow wax crudes from the Uintah Basin; #2 diesel fuel; ultra-low sulfur diesel; Central California crude oil; crude oil condensate; and sour crude oil. Results of laboratory these tests vary greatly depending on properties of the oil samples (viscosity, water content, particulate matter, etc.), and pipeline operating characteristics (oil temperature, flow rate, etc.). All samples tested demonstrated viscosity reductions, with half of the samples measuring viscosity reductions for 40% or more; one quarter of the samples measuring viscosity reductions ranging from 15% to 25%; and one quarter of the samples measuring viscosity reduction ranging from 4% to 6%.

The Company is currently in discussions with a large crude oil and transportation company with operations in the Southern United States and gulf coast region. Temple University has tested multiple oil samples provided under a non-disclosure agreement, demonstrating viscosity reductions up to 46% in a laboratory setting.

The Company is in active discussions with a large Middle Eastern oil company regarding AOT technology in Middle East, having tested multiple oil samples provided by this oil company at Temple University in 2015 and 2016. The most recent round of testing on Middle Eastern oil company samples was completed early 2017, demonstrating AOT viscosity reductions of 20% to 50% in a laboratory setting.

The Company is currently in discussions regarding AOT technologies with five additional top-tier national and multi-national oil and gas companies.

## Laboratory and Scientific Testing

From 2010 through 2013, the Company worked with the U.S. Department of Energy ("US DOE") to test its technology at the Department of Energy's Rocky Mountain Oilfield Testing Center ("RMOTC"), near Casper, Wyoming. This third-party testing independently verified the efficacy of the Company's technology operating in a controlled facility, using commercial-scale prototype of our AOT equipment. These tests were summarized in the US DOE Rocky Mountain Oilfield Test Center report dated April 4, 2012 ("ROMRC Report"), which reported AOT measured pressure loss reduction of 40% (RMOTC Report, Fig. 1, page 4) and viscosity reduction of 40% (RMOTC Report, Fig. 2, page 4); and reported observed reductions in line-loss and gains in pump operation efficiency across the entire length of the 4.4-mile test pipeline. A copy of the RMOTC April 4, 2012 Report is available on the Company website at: <https://qsenergy.box.com/DOE-STWA-RMOTC-Report>. A subsequent long-duration (24-hour) test at the RMOTC facility tested the effectiveness of AOT in treating oil overnight, as pipeline oil temperatures and viscosities drop. In its report dated May 3, 2012 to May 4, 2012, US DOE engineers recorded 56% reduction in viscosity of the AOT-treated oil versus untreated oil, with AOT effectively stabilizing oil viscosity throughout the overnight run despite dropping temperatures. A copy of the RMOTC May 3, 2012 to May 4, 2012 report is available on the Company website at: <https://qsenergy.box.com/DOE-STWA-RMOTC-Overnight>.

Laboratory testing of our AOT technology has been conducted by Dr. Rongjia Tao. Testing of the technology as applied to crude oil extraction and transmission has been conducted at Temple University in their Physics Department, in addition to the US DOE, at their Rocky Mountain Oilfield Testing Center, located on the Naval Petroleum Reserve #3 Teapot Dome Oilfield, north of Casper, Wyoming. In addition, a group led by Dr. Rongjia Tao, Chairman, Department of Physics of Temple University conducted experiments, using the laboratory-scale Applied Oil Technology apparatus at the National Institute of Standards and Technology (NIST) Center for Neutron Research (CNR). NIST is an agency of the U.S. Department of Commerce, founded in 1901 in Gaithersburg, Maryland.

Independent laboratory testing was also conducted as a collaborative effort by Temple University and PetroChina Pipeline R&D Center (“PetroChina”) in 2012. In its report dated June 26, 2012 (“PetroChina Report”), PetroChina concluded, “The above series of tests show that it is very effective to use AOT to reduce the viscosity of crude oil. We can see that AOT has significantly reduced the viscosity of Daqing crude oil, Changqing crude oil, and Venezuela crude oil, and greatly improved its flow rate.” (PetroChina Report, page 15). A copy of the PetroChina Report is available online at: <https://qsenergy.box.com/PetroChina-STWA-Report>

As previously reported in 2014, QS Energy installed and tested its commercial AOT equipment, leased and operated by TransCanada on TransCanada’s high-volume Keystone pipeline operation. The first full test of the AOT equipment on the Keystone pipeline was performed in July 2014, with preliminary data analyzed and reported by Dr. Rongjia Tao of Temple University. Upon review of the July 2014 test results and preliminary report by Dr. Tao, QS Energy and TransCanada mutually agreed that this initial test was flawed due to, among other factors, the short-term nature of the test, the inability to isolate certain independent pipeline operating factors such as fluctuations in upstream pump station pressures, and limitations of the AOT device to produce a sufficient electric field to optimize viscosity reduction. Although Dr. Tao’s preliminary report indicated promising results, QS Energy and TransCanada mutually agreed that no conclusions could be reliably reached from the July 2014 test or from Dr. Tao’s preliminary report. As a result of this test, the Company modified its testing protocols and contracted with an independent laboratory, ATS RheoSystems, a division of CANNON (“ATS”), to perform follow-up tests at the TransCanada facility. This independent laboratory performed viscosity measurements at the TransCanada facility during subsequent testing in September 2014. As detailed in its field test report dated October 6, 2014, ATS measured AOT viscosity reductions of 8% to 23% depending on flow rates and crude oil types in transit. Over the duration of a 24-hour test intended to measure the recovery of the AOT treated oil from its reduced-viscosity treated state to its original pre-treated viscosity, ATS measured viscosity reductions of 23% three hours after treatment and 11% thirteen hours after treatment, with the crude oil returning to its untreated state approximately twenty-two hours after treatment. In its summary report dated February 5, 2015, ATS concluded that i) data indicated a decrease in viscosity of crude oil flowing through the TransCanada pipeline due to AOT treatment of the crude oil; and ii) the power supply installed on our equipment would need to be increased to maximize reduction in viscosity and take full advantage of the AOT technology. A copy of the ATS summary report dated February 5, 2015 is available on the Company website at: <https://qsenergy.box.com/ATS-AOT-SummaryRpt>. A copy of the ATS field test report dated October 6, 2014, with certain confidential information redacted, is available on the Company website at: <https://qsenergy.box.com/ATS-AOT-Detailed-Report>.

Although, as reported by ATS, the efficacy of the AOT technology operated in the TransCanada field test was constrained due to limitations of the electric field applied by that unit’s power supply, subsequent analysis by QS Energy personnel of ATS test results compared against laboratory tests performed at Temple University on oil samples provided by TransCanada revealed a single test run in which the electric field generated by the AOT was sufficient to fully treat the oil given operating conditions at the time of the test. In this test run, ATS measured a 23% reduction in viscosity three hours after AOT treatment. Laboratory tests at Temple University performed on a sample of crude oil provided by TransCanada of the same type treated in that specific field test measured a 27% reduction in viscosity in the laboratory immediately following treatment. Allowing for the actual three-hour of recovery time of the field test measurement, the resulting field test viscosity reduction of 23% correlates very well to the 27% viscosity reduction achieved in the laboratory setting.

Due to the small sample size of tests performed during the TransCanada field test, results reported by ATS are statistically inconclusive and cannot be relied upon to provide proof of AOT efficacy. While more testing is required to establish the efficacy of our AOT technology, we are encouraged by the findings of our independent research laboratory and the results of subsequent comparative analysis of data collected under laboratory and commercial operating conditions. We look forward to further development and commercialization of our technology. The TransCanada Lease was terminated by TransCanada, effective October 15, 2014. The Company has modified the design of the AOT power supply such that future installations of the AOT device are expected to achieve sufficient electric field to optimize viscosity reduction.

The Company contracted Southern Research Company (“SRI”) in 2015 to perform independent laboratory tests on its prototype Joule Heat units AOT Upstream units. SRI performed tests on a prototype Joule Heat unit in September 2015, which showed promising results in which the Joule Heat prototype was observed to increase crude oil temperatures. In December 2015, we temporarily suspended Joule Heat and AOT Upstream development activities to focus Company resources on finalizing commercial development of the AOT Midstream. Testing terminated at SRI and all prototype equipment was returned to the Company. We currently plan to resume Joule Heat and AOT Upstream development in the fourth quarter of 2016 depending on the availability of sufficient capital and other resources.

### **Competition**

The oil transportation industry is highly competitive. We are aware of only three currently available competitive technologies in widespread use for reducing the viscosity of oil throughout the world. Many of our competitors have greater financial, research, marketing and staff resources than we do. For instance, oil pipeline operators use heat, diluents such as naphtha and/or natural gasoline, and/or chemical viscosity reduction additives, or chemical drag-reducing agents to improve flow in pipelines. Our research indicates that these methods are either very energy-intensive, or costly to implement on a day to day basis. Management believes that the Company’s AOT technology presents advantages over traditional methods, yet the industry’s willingness to experiment with new technology may pose some challenges in acceptance.

We are not aware of any other technology using uniform electrical field crude oil viscosity reduction technology which is designed to significantly improve pipeline operation efficiency. Although we are unaware of any technologies that compete directly with our technologies, there can be no assurance that any unknown existing or future technology will not be superior to products incorporating our AOT technology. Major domestic and international manufacturers and distributors of pipeline flow-improvement chemical solutions include Pemex, Petrotrin, Pluspetrol, Repsol, Glencore, Conoco-Philips, and Baker-Hughes. According to our research, heater skid manufacturers are generally local to the oilfield and pipeline regions, and are comprised of a large number of relatively small businesses in a fragmented industry. Major heater skid manufacturers are Parker, KW International, Thermotech Systems, LTD.

### **Government Regulation and Environmental Matters**

Our research and development activities are not subject to any governmental regulations that would have a significant impact on our business and we believe that we are in compliance with all applicable regulations that apply to our business as it is presently conducted. Our products, as such, are not subject to certification or approval by the EPA or other governmental agencies domestically or internationally. Depending upon whether we manufacture or license our products in the future and in which countries such products are manufactured or sold, we may be subject to regulations, including environmental regulations, at such time.

### **Non-Disclosure Agreements**

To protect our intellectual property, we have entered into agreements with certain employees and consultants, which limit access to, and disclosure or use of, our technology. There can be no assurance, however, that the steps we have taken to deter misappropriation of our intellectual property or third party development of our technology and/or processes will be adequate, that others will not independently develop similar technologies and/or processes or that secrecy will not be breached. In addition, although management believes that our technology has been independently developed and does not infringe on the proprietary rights of others, there can be no assurance that our technology does not and will not so infringe or that third parties will not assert infringement claims against us in the future. Management believes that the steps they have taken to date will provide some degree of protection; however, no assurance can be given that this will be the case.

### **Employees**

As of December 31, 2016, the Company had three (3) full-time employees. As of such date, we also utilized the services of six part-time consultants to assist us with various matters, including engineering, logistics, investor relations, public relations, accounting and sales and marketing. We intend to hire additional personnel to provide services when they are needed on a full-time basis. We recognize that our efficiency largely depends, in part, on our ability to hire and retain additional qualified personnel as and when needed and we have adopted procedures to assure our ability to do so.

## Item 1A. Risk Factors

**We have a history of losses, and we cannot assure you that we will ever become or remain profitable. As a result, you may lose your entire investment.**

We generated insignificant revenues from operations in late 2006 and subsequently did not generate any revenues until 2014 and we have incurred recurring net losses every year since our inception in 1998. For the fiscal years ended December 31, 2016 and 2015, and we had net losses of \$4,000,000 and \$4,229,000, and respectively. To date, we have dedicated most of our financial resources to research and development, general and administrative expenses and initial sales and marketing activities. We have funded all of our activities through sales of our debt and equity securities for cash. We anticipate net losses and negative cash flow to continue until such time as our products are brought to market in sufficient amounts to offset operating losses. Our ability to achieve profitability is dependent upon our continuing research and development, product development, and sales and marketing efforts, to deliver viable products and the Company's ability to successfully bring them to market. Although our management is optimistic that we will succeed in marketing products incorporating our technologies, there can be no assurance that we will ever generate significant revenues or that any revenues that may be generated will be sufficient for us to become profitable or thereafter maintain profitability. If we cannot generate sufficient revenues or become or remain profitable, we may have to cease our operations and liquidate our business.

**Our independent auditors have expressed doubt about our ability to continue as a going concern, which may hinder our ability to obtain future financing.**

In their report dated March 31, 2017, our independent auditors stated that our consolidated financial statements for the year ended December 31, 2016 were prepared assuming that we would continue as a going concern. Our ability to continue as a going concern is an issue raised as a result of our recurring net losses and accumulated deficit from operations since inception. We had a stockholders' deficit of \$1,358,000 as of December 31, 2016. Our ability to continue as a going concern is subject to our ability to obtain significant additional capital to fund our operations and to generate revenue from sales, of which there is no assurance. The going concern qualification in the auditor's report could materially limit our ability to raise additional capital. If we fail to raise sufficient capital, we may have to liquidate our business and you may lose your investment.

**Since we have not yet begun to generate positive cash flow from operations, our ability to continue operations is dependent on our ability to either begin to generate positive cash flow from operations or our ability to raise capital from outside sources.**

We have not generated positive cash flow from operations since our inception in February 1998 and have relied on external sources of capital to fund operations. We had \$136,000 in cash at December 31, 2016 and used cash from operations of \$1,626,000 for the year ended December 31, 2016.

We currently do not have credit facilities available with financial institutions or other third parties, and historically have relied upon best efforts third-party funding. Though we have been successful at raising capital on a best efforts basis in the past, we can provide no assurance that we will be successful in any future best-efforts financing endeavors. We will need to continue to rely upon financing from external sources to fund our operations for the foreseeable future. If we are unable to raise sufficient capital from external sources to fund our operations, we may need to curtail operations.

**We will need substantial additional capital to meet our operating needs, and we cannot be sure that additional financing will be available.**

As of December 31, 2016 and thereafter, our expenses ran, and are expected to continue to run, at an approximate "cash burn rate" of \$100,000 per month, which amount could increase during 2017. In order to fund our capital needs, we conducted private offerings of our securities in 2015 and 2016. While discussion regarding additional interim and permanent financings are being actively conducted, management cannot predict with certainty that an equity line of credit will be available to provide adequate funds, or any funds at all, or whether any additional interim or permanent financings will be available at all or, if it is available, if it will be available on favorable terms. If we cannot obtain needed capital, our research and development, and sales and marketing plans, business and financial condition and our ability to reduce losses and generate profits will be materially and adversely affected.

Our business prospects are difficult to predict because of our limited operating history, early stage of development and unproven business strategy. Since our incorporation in 1998, we have been and continue to be involved in development of products using our technology, establishing manufacturing and marketing of these products to consumers and industry partners. Although we believe our technology and products in development have significant profit potential, we may not attain profitable operations and our management may not succeed in realizing our business objectives.

**If we are not able to devote adequate resources to product development and commercialization, we may not be able to develop our products.**

Our business strategy is to develop, manufacture and market products incorporating our AOT and Joule Heat technologies. We believe that our revenue growth and profitability, if any, will substantially depend upon our ability to raise additional necessary capital for research and development, complete development of our products in development and successfully introduce and commercialize our products.

Certain of our products are still under various stages of development. Because we have limited resources to devote to product development and commercialization, any delay in the development of one product or reallocation of resources to product development efforts that prove unsuccessful may delay or jeopardize the development of other product candidates. Although our management believes that it can finance our product development through private placements and other capital sources, if we do not develop new products and bring them to market, our ability to generate revenues will be adversely affected.

**The commercial viability of QS Energy's technologies remains largely unproven and we may not be able to attract customers.**

Despite the fact that we leased AOT equipment in 2014 to a major oil pipeline operator and tested the equipment on their high-volume pipeline under normal operating conditions, have entered into a lease agreement with a second major oil pipeline operator to operate and test AOT equipment in 2015, and initiated testing of our Joule Heat technology in laboratory and commercial operating conditions in 2015, the commercial viability of our devices is not known at this time. If commercial opportunities are not realized from the use of products incorporating the AOT and Joule Heat technologies, our ability to generate revenue would be adversely affected. There can be no assurances that we will be successful in marketing our products, or that customers will ultimately purchase our products. Failure to have commercial success from the sale of our products will significantly and negatively impact our financial condition. There can be no assurances that we will be successful in marketing our products, or that customers will ultimately purchase our products. Failure to have commercial success from the sale of our products will significantly and negatively impact our financial condition.

**If our products and services do not gain market acceptance, it is unlikely that we will become profitable.**

At this time, our technology is commercially unproven, and the use of our technology by others is limited. Specific examples of use to date include:

- Temple University, testing, research and joint development;
- U.S. Department of Energy Rocky Mountain Oilfield Testing Center, testing and research;
- PetroChina Pipeline R&D Center, testing and research;
- TransCanada, testing;
- Kinder Morgan Crude and Condensate, testing, possible conversion to commercial use;
- Newfield Exploration Company, testing and joint development;
- On-site testing of a laboratory-scale AOT at a Canadian oil producer's facility in Alberta Canada.

The commercial success of our products will depend upon the adoption of our technology by the oil industry. Market acceptance will depend on many factors, including:

- the willingness and ability of consumers and industry partners to adopt new technologies;
- our ability to convince potential industry partners and consumers that our technology is an attractive alternative to other technologies;
- our ability to manufacture products and provide services in sufficient quantities with acceptable quality and at an acceptable cost; and,
- our ability to place and service sufficient quantities of our products.

If our products do not achieve a significant level of market acceptance, demand for our products will not develop as expected and it is unlikely that we will become profitable.

**We outsource and rely on third parties for the manufacture of our products.**

Our business model calls for the outsourcing of the manufacture of our products in order to reduce our capital and infrastructure costs, capital expenditure and personnel. Accordingly, we must enter into agreements with other companies that can assist us and provide certain capabilities that we do not possess, and to increase our manufacturing capacity as necessary. We can provide no assurances that any such outsourcing will be at commercially acceptable rates or profitable. Moreover, we do not have the required financial and human resources or capability to manufacture, market and sell our products. Our business model calls for the outsourcing of the manufacture, and sales and marketing of our products in order to reduce our capital and infrastructure costs as a means of potentially improving our financial position and the profitability of our business. Accordingly, we must enter into agreements with other companies that can assist us and provide certain capabilities that we do not possess. We may not be successful in entering into additional such alliances on favorable terms or at all. Furthermore, any delay in entering into agreements could delay the development and commercialization of our products and reduce their competitiveness even if they reach the market. Any such delay related to our existing or future agreements could adversely affect our business.

**If any party to which we have outsourced certain functions fails to perform its obligations under agreements with us, the development and commercialization of our products could be delayed or curtailed.**

To the extent that we rely on other companies to manufacture, sell or market our products, we will be dependent on the timeliness and effectiveness of their efforts. If any of these parties do not perform its obligations in a timely and effective manner, the commercialization of our products could be delayed or curtailed because we may not have sufficient financial resources or capabilities to continue such development and commercialization on our own.

**Any revenues that we may earn in the future are unpredictable, and our operating results are likely to fluctuate from quarter to quarter.**

We believe that our future operating results will fluctuate due to a variety of factors, including delays in product development, market acceptance of our new products, changes in the demand for and pricing of our products, competition and pricing pressure from competitive products, manufacturing delays and expenses related to and the results of proceedings relating to our intellectual property.

A large portion of our expenses, including expenses for our facilities, equipment and personnel, is relatively fixed and not subject to further significant reduction. In addition, we expect our operating expenses will increase in 2015 as we continue our research and development and increase our production and marketing activities, among other activities. Although we expect to generate revenues from sales of our products, revenues may decline or not grow as anticipated and our operating results could be substantially harmed for a particular fiscal period. Moreover, our operating results in some quarters may not meet the expectations of stock market analysts and investors. In that case, our stock price most likely would decline.

**Nondisclosure agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information.**

In order to protect our proprietary technology and processes, we rely in part on nondisclosure agreements with our employees, licensing partners, customers, consultants, agents and other organizations to which we disclose our proprietary information. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. In addition, others may independently discover trade secrets and proprietary information, and in such cases, we could not assert any trade secret rights against such parties. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. Since we rely on trade secrets and nondisclosure agreements, in addition to patents, to protect some of our intellectual property, there is a risk that third parties may obtain and improperly utilize our proprietary information to our competitive disadvantage. We may not be able to detect unauthorized use or take appropriate and timely steps to enforce our intellectual property rights.

**The manufacture, use or sale of our current and proposed products may infringe on the patent rights of others, and we may be forced to litigate if an intellectual property dispute arises.**

We have taken measures to protect ourselves from infringing on the patent rights of others; however, if we infringe or are alleged to have infringed another party's patent rights, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, do not successfully defend an infringement action or are unable to have infringed patents declared invalid, we may incur substantial monetary damages, encounter significant delays in marketing our current and proposed product candidates, be unable to conduct or participate in the manufacture, use or sale of product, candidates or methods of treatment requiring licenses, lose patent protection for our inventions and products; or find our patents are unenforceable, invalid, or have a reduced scope of protection.

Parties making such claims may be able to obtain injunctive relief that could effectively block our ability to further develop or commercialize our current and proposed product candidates in the United States and abroad and could result in the award of substantial damages. Defense of any lawsuit or failure to obtain any such license could substantially harm the company. Litigation, regardless of outcome, could result in substantial cost to and a diversion of efforts by the Company to operate its business.

**We may face costly intellectual property / license agreements disputes.**

Our ability to compete effectively will depend in part on our ability to develop and maintain proprietary aspects of our technologies and either to operate without infringing the proprietary rights of others or to obtain rights to technology owned by third parties. Our pending patent applications, specifically patent rights of the AOT technology and Joule Heating process may not result in the issuance of any patents or any issued patents that will offer protection against competitors with similar technology. Patents we have licensed for our technologies, and which we may receive, may be challenged, invalidated or circumvented in the future or the rights created by those patents may not provide a competitive advantage. We also rely on trade secrets, technical know-how and continuing invention to develop and maintain our competitive position. Others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets. See Note 6 of our financial statements attached hereto for a discussion and status of our license agreements with Temple University.

**We may not be able to attract or retain qualified senior personnel.**

We believe we are currently able to manage our current business with our existing management team. However, as we expand the scope of our operations, we will need to obtain the full-time services of additional senior management and other personnel. Competition for highly-skilled personnel is intense, and there can be no assurance that we will be able to attract or retain qualified senior personnel. Our failure to do so could have an adverse effect on our ability to implement our business plan. As we add full-time senior personnel, our overhead expenses for salaries and related items will increase compensation packages, these increases could be substantial.

**If we lose our key personnel or are unable to attract and retain additional personnel, we may be unable to achieve profitability.**

Our future success is substantially dependent on the efforts of our senior management. The loss of the services of members of our senior management may significantly delay or prevent the achievement of product development and other business objectives. Because of the scientific nature of our business, we depend substantially on our ability to attract and retain qualified marketing, scientific and technical personnel, including consultants. There is intense competition among specialized automotive companies for qualified personnel in the areas of our activities. If we lose the services of, or do not successfully recruit key marketing, scientific and technical personnel, the growth of our business could be substantially impaired. We do not maintain key man insurance for any of these individuals.

**Currently, there is only very limited trading in our stock, so you may be unable to sell your shares at or near the quoted bid prices if you need to sell your shares.**

The shares of our common stock are thinly-traded on the OTC Bulletin Board, meaning that the number of persons interested in purchasing our common shares at or near bid prices at any given time may be relatively small or non-existent. This situation is attributable to a number of factors, including the fact that we are a small company engaged in a high risk business which is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that can generate or influence daily trading volume and valuation. Should we even come to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven, early stage company such as ours or purchase or recommend the purchase of our shares until such time as we became more seasoned and viable. As a consequence, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a large and steady volume of trading activity that will generally support continuous trading without negatively impacting share price. We cannot provide any assurance that a broader or more active public trading market for shares of our common stock will develop or be sustained. Due to these conditions, we cannot give any assurance that shareholders will be able to sell their shares at or near bid prices or at all.

**The market price of our stock is volatile.**

The market price for our common stock has been volatile during the last year, ranging from a closing price of \$0.50 on March 17, 2015 to a closing price of \$0.05 on December 30, 2016, and a closing price of \$0.09 on March 21, 2016. Additionally, the price of our stock has been both higher and lower than those amounts on an intra-day basis in the last year. Because our stock is thinly traded, its price can change dramatically over short periods, even in a single day. The market price of our common stock could fluctuate widely in response to many factors, including, developments with respect to patents or proprietary rights, announcements of technological innovations by us or our competitors, announcements of new products or new contracts by us or our competitors, actual or anticipated variations in our operating results due to the level of development expenses and other factors, changes in financial estimates by securities analysts and whether any future earnings of ours meet or exceed such estimates, conditions and trends in our industry, new accounting standards, general economic, political and market conditions and other factors.

**Substantial sales of common stock could cause our stock price to fall.**

In the past year, there have been times when average daily trading volume of our common stock has been extremely low, and there have been many days in which no shares were traded at all. At other times, the average daily trading volume of our common stock has been high. Nevertheless, the possibility that substantial amounts of common stock may be sold in the public market may adversely affect prevailing market prices for our common stock and could impair a shareholder's ability to sell our stock or our ability to raise capital through the sale of our equity securities.

**Potential issuance of additional shares of our common stock could dilute existing stockholders.**

We are authorized to issue up to 300,000,000 shares of common stock. To the extent of such authorization, our Board of Directors has the ability, without seeking stockholder approval, to issue additional shares of common stock in the future for such consideration as the Board of Directors may consider sufficient. The issuance of additional common stock in the future will reduce the proportionate ownership and voting power of shareholders.

### **We may not be successful in identifying, making, financing and integrating acquisitions.**

A component of our business strategy is to make selective acquisitions that will strengthen our core services or presence in selected markets. The success of this strategy will depend, among other things, on our ability to identify suitable acquisition candidates, to obtain acceptable financing, to timely and successfully integrate acquired businesses or assets and to retain the key personnel and the customer base of acquired businesses. Any future acquisitions could present a number of risks, including but not limited to:

- incorrect assumptions regarding the future results of acquired operations or assets or expected cost reductions or other synergies expected to be realized as a result of acquiring operations or assets;
- failure to integrate successfully the operations or management of any acquired operations or assets in a timely manner;
- failure to retain or attract key employees; and
- diversion of management's attention from existing operations or other priorities.

If we are unable to identify, make and successfully integrate acquired businesses, it could have a material adverse effect on our business, financial condition, results of operations and cash flows.

### **Our common stock is subject to penny stock regulation, which may make it more difficult for us to raise capital.**

Our common stock is considered penny stock under SEC regulations. It is subject to rules that impose additional sales practice requirements on broker-dealers who sell our securities. For example, broker-dealers must make a suitability determination for the purchaser, receive the purchaser's written consent to the transaction prior to sale, and make special disclosures regarding sales commissions, current stock price quotations, recent price information and information on the limited market in penny stock. Because of these additional obligations, some broker-dealers may not effect transactions in penny stocks, which may adversely affect the liquidity of our common stock and shareholders' ability to sell our common stock in the secondary market. This lack of liquidity may make it difficult for us to raise capital in the future.

### **Item 1B. Unresolved Staff Comments**

None

### **Item 2. Properties**

In 2016, the Company moved its executive offices to 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111 in May 2016. Prior to this move, the Company's executive offices were located at 735 State Street, Suite 500, Santa Barbara, California 93101.

Total rent expense under these leases in effect during the years ended December 31, 2016, and 2015 was \$45,000 and \$70,000, respectively which are included as part of Operating Expenses in the attached consolidated statements of operations. Remaining minimum lease commitments under the non-cancellable office lease at December 31, 2016 were \$4,000 through May 2017. See Note 9 of our financial statements attached hereto for a discussion and status of our office lease agreements.

We believe our facilities are adequate to meet our current and near-term needs.

### **Item 3. Legal Proceedings**

There is no litigation of any significance with the exception of the matters that have arisen under, and are being handled in, the normal course of business.

### **Item 4. Mine Safety Disclosures.**

None.

## PART II

### Item 5. Market for Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Through May 21, 2007, our common stock was traded on the Over the Counter Bulletin Board (the “OTCBB”) under the symbol “ZERO”. Effective May 22, 2007, our common stock was removed from the OTCBB and placed on the “Pink Sheets”. Effective February 8, 2010, our common stock was reinstated and currently trades on the OTCBB. On October 30, 2014, our common stock was listed for trading on the OTCQX and OTCQB marketplace under the symbol “ZERO”. Effective August 11, 2015, the Company changed its name to QS Energy, Inc., and changed its trading symbol to “QSEP”. The following table sets forth the high and low bid prices of the Company’s common stock for the quarters indicated as quoted on the OTCBB as reported by Yahoo Finance. These quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not represent actual transactions.

	2016		2015		2014	
	High	Low	High	Low	High	Low
First Quarter	\$ 0.21	\$ 0.07	\$ 0.51	\$ 0.34	\$ 1.12	\$ 0.76
Second Quarter	\$ 0.19	\$ 0.10	\$ 0.47	\$ 0.30	\$ 0.89	\$ 0.64
Third Quarter	\$ 0.17	\$ 0.10	\$ 0.38	\$ 0.15	\$ 0.84	\$ 0.50
Fourth Quarter	\$ 0.07	\$ 0.03	\$ 0.34	\$ 0.13	\$ 0.74	\$ 0.34

According to the records of our transfer agent, we had approximately 1,000 stockholders of record of our common stock at March 27, 2016. The Company believes that the number of beneficial owners is substantially higher than this amount.

We do not pay a dividend on our common stock and we currently intend to retain future cash flows to finance our operations and fund the growth of our business. Any payment of future dividends will be at the discretion of our Board of Directors and will depend upon, among other things, our earnings, financial condition, capital requirements, level of indebtedness, contractual restrictions in respect to the payment of dividends and other factors that our Board of Directors deems relevant.

#### Issuances of Unregistered Securities in Current Fiscal Year

During the year ended December 31, 2016, the Company issued an aggregate of 15,213,449 shares of its common stock as follows:

- The Company issued 300,000 shares of common stock to consultants for services rendered with a fair value of \$48,000 which is included as part of Operating Expenses in the accompanying consolidated statements of operations. The shares were valued at the trading price at the date of issuance.
- The Company issued 14,913,449 shares of its common stock valued at \$1,491,000 at conversion prices of \$0.10 per share upon voluntary conversion of certain of the Company’s convertible promissory notes summarized by month as follows:

#### **Shares of Common Stock Issued in Year Ended December 31, 2016**

Month of Issuance	Principal and Interest Converted to Common Stock	Conversion Price	Shares of Common Stock Issued
January 2016	\$ 33,000	\$ 0.10/share	330,000
February 2016	\$ 77,000	\$ 0.10/share	770,000
March 2016	\$ 248,000	\$ 0.10/share	2,479,049
April 2016	\$ 476,000	\$ 0.10/share	4,756,400
June 2016	\$ 60,000	\$ 0.10/share	605,000
July 2016	\$ 165,000	\$ 0.10/share	1,650,000
August 2016	\$ 231,000	\$ 0.10/share	2,310,000
October 2016	\$ 201,000	\$ 0.10/share	2,013,000
	\$ 1,491,000	\$	14,913,449

The Company issued convertible notes in aggregate value of \$1,587,000 for net proceeds of \$1,443,000, convertible into 15,870,449 shares in common stock of the Company at a conversion price of \$0.10 per share, and in connection with these notes, issued warrants to purchase 7,935,225 shares of common stock of the Company at an exercise price of \$0.10 per share and expiring one year from the date of issuance, summarized by month as follows:

**Convertible Notes Issued in Year Ended December 31, 2016**

Month of Issuance	Cash Proceeds	Face Value of Note	Conversion Price	Convertible to Shares of Common Stock	Warrants to Purchase Common Stock	Warrant Exercise Price	Warrant Expiration Month
January 2016	\$ 30,000	\$ 33,000	\$ 0.10/share	330,000	165,000	\$ 0.10/share	January 2017
February 2016	\$ 171,000	\$ 187,000	\$ 0.10/share	1,874,049	937,025	\$ 0.10/share	February 2017
March 2016	\$ 562,000	\$ 618,000	\$ 0.10/share	6,183,100	3,091,550	\$ 0.10/share	March 2017
April 2016	\$ 27,000	\$ 30,000	\$ 0.10/share	300,300	150,150	\$ 0.10/share	April 2017
June 2016	\$ 115,000	\$ 127,000	\$ 0.10/share	1,265,000	632,500	\$ 0.10/share	June 2017
July 2016	\$ 370,000	\$ 407,000	\$ 0.10/share	4,070,000	2,035,000	\$ 0.10/share	July 2017
August 2016	\$ 168,000	\$ 185,000	\$ 0.10/share	1,848,000	924,000	\$ 0.10/share	August 2017
	\$ 1,443,000	\$ 1,587,000	\$	15,870,449	7,935,225		

**Issuances of Unregistered Securities in Prior Fiscal Year**

During the year ended December 31, 2015, the Company issued an aggregate of 2,803,333 shares of its common stock as follows:

- On January 12, 2015, the Company issued 200,000 shares of its common stock to the holder of a warrant upon exercise of the warrant at a price of \$0.25 per share with proceeds of \$50,000.
- The Company issued 2,603,333 shares of its common stock valued at \$669,000 at conversion prices of \$0.10-\$0.48 per share upon voluntary conversion of certain of the Company's convertible promissory notes as follows:

**Shares of Common Stock Issued in Year Ended December 31, 2015**

Month of Issuance	Principal and Interest Converted to Common Stock	Conversion Price	Shares of Common Stock Issued
January 2015	\$ 53,000	\$ 0.48	110,000
June 2015	\$ 550,000	\$ 0.30	1,833,333
December 2015	\$ 66,000	\$ 0.10	660,000
Total, 2015	\$ 669,000	\$ 0.26	2,603,333

The Company issued convertible notes in aggregate value of \$726,000 for net proceeds of \$660,000, convertible into 3,593,333 shares in common stock of the Company at a conversion prices of \$0.10-\$0.30 per share, and in connection with these notes, issued warrants to purchase 1,796,667 shares of common stock of the Company at exercise prices of \$0.10-\$0.30 per share and expiring one year from the date of issuance, as follows:

**Convertible Notes Issued in Year Ended December 31, 2015**

Month of Issuance	Cash Proceeds	Face Value of Note	Conversion Price	Convertible to Shares of Common Stock	Warrants to Purchase Common Stock	Warrant Exercise Price	Warrant Expiration Month
May 2015	\$ 350,000	\$ 385,000	\$ 0.30	1,283,333	641,667	\$ 0.30	May 2016
June 2015	\$ 150,000	\$ 165,000	\$ 0.30	550,000	275,000	\$ 0.30	June 2016
November 2015	\$ 30,000	\$ 33,000	\$ 0.10	330,000	165,000	\$ 0.10	November 2016
December 2015	\$ 130,000	\$ 143,000	\$ 0.10	1,430,000	715,000	\$ 0.10	December 2016
<b>Total, 2015</b>	<b>\$ 660,000</b>	<b>\$ 726,000</b>	<b>\$ 0.20</b>	<b>3,593,333</b>	<b>1,796,667</b>	<b>\$ 0.20</b>	

The sales of the securities described above were made in reliance on the exemptions from registration set forth in Section 4(2) of the Securities Act of 1933, as amended (the "Act"), and/or Regulation S promulgated thereunder, in that the sales were made without general advertising or solicitation in non-public offerings to accredited U.S. investors and/or to non-U.S. investors in transactions outside the United States. The above described shares of common stock, convertible notes and warrants were issued by the Company in furtherance of the terms and conditions of each such instrument, forms of which were attached to our form 10-K filed March 16, 2016 as Exhibits 10.117, 10.118 and 10.119.

## Item 6. Selected Financial Data

The selected consolidated financial data set forth below should be read in conjunction with our consolidated financial statements and related notes thereto and management's discussion and analysis included elsewhere in this Form 10-K annual report and in our annual reports that have been filed for the prior years presented.

### CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,	
	2016	2015
<b>Net sales</b>	\$ —	\$ —
<b>Costs and Expenses</b>		
Operating expenses	2,103,000	2,915,000
Research and development expenses	279,000	578,000
<b>Loss before other income (expense)</b>	<b>(2,382,000)</b>	<b>(3,493,000)</b>
<b>Other income (expense)</b>		
Interest and financing expense	(1,617,000)	(747,000)
Other income, net	(1,000)	11,000
<b>Net loss</b>	<b>\$ (4,000,000)</b>	<b>\$ (4,229,000)</b>
<b>Net loss per common share, basic and diluted</b>	<b>\$ (0.02)</b>	<b>\$ (0.02)</b>
<b>Weighted average common shares outstanding, basic and diluted</b>	<b>192,831,810</b>	<b>182,267,719</b>

### CONSOLIDATED BALANCE SHEETS

	Year ended December 31,	
	2016	2015
<b>Assets</b>		
Cash	\$ 136,000	\$ 349,000
Property and equipment, net of accumulated depreciation	17,000	22,000
Prepaid expenses and other assets	33,000	57,000
<b>Total assets</b>	<b>\$ 186,000</b>	<b>\$ 428,000</b>
<b>Liabilities</b>		
Accounts payable and accrued expenses	\$ 1,191,000	\$ 963,000
Convertible debentures, net of discount	348,000	222,000
Other current liabilities	5,000	25,000
<b>Total Liabilities</b>	<b>1,544,000</b>	<b>1,210,000</b>
<b>Stockholders' deficit</b>	<b>(1,358,000)</b>	<b>(782,000)</b>
<b>Total liabilities and stockholders' deficit</b>	<b>\$ 186,000</b>	<b>\$ 428,000</b>

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation**

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the Consolidated Financial Statements and supplementary data referred to in Item 7 of this Form 10-K.

This discussion contains forward-looking statements that involve risks and uncertainties. Such statements, which include statements concerning future revenue sources and concentration, selling, general and administrative expenses, research and development expenses, capital resources, additional financings and additional losses, are subject to risks and uncertainties, including, but not limited to, those discussed above in Item 1 and elsewhere in this Form 10-K, particularly in "Risk Factors," that could cause actual results to differ materially from those projected. Unless otherwise expressly indicated, the information set forth in this Form 10-K is as of December 31, 2016, and we undertake no duty to update this information.

### **Overview**

In the second quarter of 2014, we reached a major milestone in the Company's evolution, generating revenues from our AOT technology for the first time since our inception in February 1998. We continue to devote the bulk of our efforts to the promotion, design, testing and the commercial manufacturing and operations of our crude oil pipeline products in the upstream and midstream energy sector. We anticipate that these efforts will continue during 2017.

Our expenses to date have been funded primarily through the sale of shares of common stock and convertible debt, as well as proceeds from the exercise of stock purchase warrants and options. We raised capital in 2016 and will need to raise substantial additional capital in 2017, and possibly beyond, to fund our sales and marketing efforts, continuing research and development, and certain other expenses, until our revenue base grows sufficiently.

### **Results of Operation**

#### **Revenue Comparison, 2016 and 2015**

The Company had no revenues in the fiscal years ended 2016 and 2015.

#### **Operating Expense Comparison, 2016 and 2015**

Operating expenses were \$2,103,000 for the fiscal year ended December 31, 2016, compared to \$2,915,000 for the fiscal year ended December 31, 2015, a decrease of \$812,000. This decrease was attributable to decreases in non-cash expenses of \$244,000 and cash expenses of \$568,000. Specifically, the decrease in non-cash expenses is attributable to a decrease in stock based compensation related to warrants and options issued to employees, directors and consultants of \$271,000, and a decrease in depreciation of \$5,000, offset by an increase in expense incurred upon modification of terms to an existing warrant of \$32,000. The decrease in cash expenses is attributable to decreases in consulting fees of \$26,000, corporate expenses of \$27,000, insurance of \$18,000, legal and accounting of \$97,000, rents and utilities of \$20,000, salaries and benefits of \$189,000, travel of \$183,000, and other general and administrative expenses of \$8,000.

Research and development expenses were \$279,000 for the fiscal year ended December 31, 2016, compared to \$578,000 for the fiscal year ended December 31, 2015, a decrease of \$299,000. This decrease is attributable to decreases in AOT and Joule Heat product prototype development costs of \$236,000 and general testing and development costs of \$26,000, and licensing and research fees of \$37,000. In the fourth quarter of 2015, the Company suspended further development of the Joule Heat technology to concentrate its resources to the AOT product development.

Other income was a net expense of \$1,000 for the fiscal year ended December 31, 2016, compared to an income of \$11,000 for the fiscal year ended December 31, 2015, a decrease of \$12,000. In 2015, the Company recorded a gain from disposition of fixed assets of \$12,000. In 2016, the Company recorded a loss of \$3,000.

Interest expenses were \$1,617,000 for the fiscal year ended December 31, 2016, compared to \$747,000 for the fiscal year ended December 31, 2015, an increase of \$870,000. This increase is attributable to an increase in non-cash interest and financing expense of \$870,000 to account the fair value of the warrants issued with our convertible notes and the notes' beneficial conversion feature.

We had a net loss of \$4,000,000 or \$0.02 loss per share for the fiscal year ended December 31, 2016 compared to a net loss of \$4,229,000 or \$0.02 loss per share for the fiscal year ended December 31, 2015.

## Liquidity and Capital Resources

### General

We have incurred negative cash flow from operations since our inception in 1998. As of December 31, 2016, we had cash of \$136,000 and a stockholders' deficit of \$1,358,000. Our operating cash flow in 2016 was funded primarily through cash reserves, the exercise of stock purchase warrants for cash, and the issuance of convertible notes for cash.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. As reflected in the accompanying consolidated financial statements, the Company had a net loss of \$4,000,000 and used cash in operations of \$1,626,000 for the year ended December 31, 2016. These factors raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued. Our ability to continue as a going concern is dependent upon our ability to raise additional funds and implement our business plan. The consolidated financial statements do not include any adjustments that might be necessary if we are unable to continue as a going concern.

### Summary

At December 31, 2016, the Company had cash on hand in the amount of \$136,000. Management estimates that the current funds on hand will be sufficient to continue operations through April 2017. Management is currently seeking additional funds, primarily through the issuance of debt and equity securities for cash to operate our business, including without limitation the expenses it will incur in connection with the license agreements with Temple; costs associated with product development and commercialization of the AOT and Joule Heat technologies; costs to manufacture and ship the products; costs to design and implement an effective system of internal controls and disclosure controls and procedures; costs of maintaining our status as a public company by filing periodic reports with the SEC and costs required to protect our intellectual property. In addition, as discussed below, the Company has substantial contractual commitments, including without limitation salaries to our executive officer pursuant to an employment agreement, and certain payments to a former officer, during the remainder of 2017 and beyond. No assurance can be given that any future financing will be available or, if available, that it will be on terms that are satisfactory to the Company. Even if the Company is able to obtain additional financing, it may contain undue restrictions on our operations, in the case of debt financing or cause substantial dilution for our stock holders, in case of equity financing.

## Contractual Obligations

The Company's contractual commitments for future periods, including office leases, minimum guaranteed compensation payments and other agreements as described in the following table and associated footnotes:

Year ending December 31,	Office Lease (1)	License Agreements (2)	Compensation Agreements (3)	Total Obligations
2017	\$ 4,000	\$ 187,500	\$ 536,300	\$ 727,800
2018	-	187,500	598,400	785,900
2019	-	187,500	149,600	373,100
2020	-	187,500	-	187,500
2021	-	187,500	-	187,500
Total	<u>\$ 4,000</u>	<u>\$ 937,500</u>	<u>\$ 1,284,300</u>	<u>\$ 2,225,800</u>

- (1) Consists of rent for the Company's Santa Barbara Hollister office expiring on May 31, 2017.
- (2) Consists of license maintenance fees to Temple University in the amount of \$187,500 paid annually through the life of the underlying patents or until otherwise terminated by either party.
- (3) Consists of base salary and certain contractually-provided benefits, to i) an executive officer, pursuant to an employment agreement at a base annual salary of \$290,000 through March 31, 2017 and severance in the amount of \$580,000 that will be paid through March 31, 2019 pursuant to a separation agreement effective April 1, 2017; ii) an executive officer, pursuant to a two-year employment agreement effective April 1, 2017 at a base annual salary of \$150,000 per year under a two-year contract effective April 1, 2017; iii) an executive officer, pursuant to an employment agreement at a base annual salary of \$158,400 per year; and iv) and a severance agreement of a former officer in the amount of \$15,000. See Item 9B below for other information.

### **Licensing Fees to Temple University**

For details of the licensing agreements with Temple University, see Financial Statements attached hereto, Note 6.

### **Critical Accounting Policies and Estimates**

Our discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, expenses, and related disclosure of contingent assets and liabilities. We evaluate, on an on-going basis, our estimates and judgments, including those related to the useful life of the assets. We base our estimates on historical experience and assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The methods, estimates and judgments we use in applying our most critical accounting policies have a significant impact on the results that we report in our consolidated financial statements. The SEC considers an entity's most critical accounting policies to be those policies that are both most important to the portrayal of a company's financial condition and results of operations and those that require management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about matters that are inherently uncertain at the time of estimation. For a more detailed discussion of the accounting policies of the Company, see Note 2 of the Notes to the Consolidated Financial Statements, "Summary of Significant Accounting Policies".

We believe the following critical accounting policies, among others, require significant judgments and estimates used in the preparation of our consolidated financial statements.

#### **Estimates**

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Certain significant estimates were made in connection with preparing our consolidated financial statements as described in Note 2 to Notes to Consolidated Financial Statements. Actual results could differ from those estimates.

#### **Stock-Based Compensation**

The Company periodically issues stock options and warrants to employees and non-employees in non-capital raising transactions for services and for financing costs. The Company accounts for stock option and warrant grants issued and vesting to employees based on the authoritative guidance provided by the Financial Accounting Standards Board whereas the value of the award is measured on the date of grant and recognized over the vesting period. The Company accounts for stock option and warrant grants issued and vesting to non-employees in accordance with the authoritative guidance of the Financial Accounting Standards Board whereas the value of the stock compensation is based upon the measurement date as determined at either a) the date at which a performance commitment is reached, or b) at the date at which the necessary performance to earn the equity instruments is complete. Non-employee stock-based compensation charges generally are amortized over the vesting period on a straight-line basis. In certain circumstances where there are no future performance requirements by the non-employee, option grants are immediately vested and the total stock-based compensation charge is recorded in the period of the measurement date.

The fair value of the Company's common stock option grant is estimated using the Black-Scholes Option Pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the common stock options, and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes Option Pricing model, and based on actual experience. The assumptions used in the Black-Scholes Option Pricing model could materially affect compensation expense recorded in future periods.

#### **Recent Accounting Pronouncements**

See Note 2 of the financial statements for discussion of recent accounting pronouncements.

## **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

We issue from time to time fixed rate discounted convertible notes. Our convertible notes and our equity securities are exposed to risk as set forth above, in Item 1A, "Risk Factors." Please also see Item 7, above, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

## **Item 8. Financial Statements and Supplementary Data**

Our consolidated financial statements as of and for the years ended December 31, 2016 and 2015 are presented in a separate section of this report following Item 15 and begin with the index on page F-1.

## **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

## **Item 9A. Controls and Procedures**

### **1. Disclosure Controls and Procedures**

The Company's management, with the participation of the Company's chief executive officer and chief financial officer, evaluated, as of December 31, 2016, the effectiveness of the Company's disclosure controls and procedures, which were designed to be effective at the reasonable assurance level. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of the Company's disclosure controls and procedures as of December 31, 2016, management, the chief executive officer and the chief financial officer concluded that the Company's disclosure controls and procedures were effective at the reasonable assurance level at that date.

### **2. Internal Control over Financial Reporting**

#### **(a) Management's Annual Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the company's principal executive and principal financial officers and effected by the company's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;

Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

QS Energy, Inc.'s internal control system is designed to provide reasonable assurance to the Company's management and Board regarding the preparation and fair presentation of published financial statements. All internal control systems, no matter how well designed, have inherent limitations which may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of QS Energy, Inc.'s internal controls over financial reporting as of December 31, 2016. In making this assessment, it used the criteria set forth in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") (2013 framework). Based on our assessment, we conclude that, as of December 31, 2016, the Company has maintained effective internal control over financial reporting based on those criteria.

This Annual Report on Form 10-K does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our registered public accounting firm pursuant to rules of the Securities and Exchange Commission that permit us to provide only management's report in this Annual Report on Form 10-K.

#### **(b) Changes in Internal Control over Financial Reporting**

No change in the Company's internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the fourth quarter ended December 31, 2016 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

#### **Item 9B. Other Information**

On March 29, 2017, at a meeting of the Board of Directors of the Company, the Board acknowledged the resignations of Gregg Bigger and Mark Stubbs from the Board of the Company, effective April 1, 2017. Seeking to fill the vacant seats on the Board and after discussion, the Board unanimously: a) appointed Jason Lane and Eric Bunting to sit on the Board of Directors of the Company; b) appointed Mr. Lane to serve as Chairman of the Board of the Company; c) appointed Tom Bundros to serve as Chairman of the Audit Committee of the Board; and d) determined that in connection with the resignations of Messrs. Bigger and Stubbs as directors of the Company, all unvested options and warrants previously granted to them shall immediately vest as of April 1, 2017.

At the same meeting, given that the Company and Mr. Bigger had agreed to a mutual termination of Mr. Bigger's employment agreement and employment with the Company, the Company and Mr. Bigger have determined to enter into a separation agreement. The Board unanimously ratified a separation agreement between Mr. Bigger and the Company, effective April 1, 2017. In addition, in connection with the termination of Mr. Bigger's employment as CEO and CFO of the Company, effective April 1, 2017, and after discussion by the Board, the Board determined to hire Mr. Lane as Chief Executive Officer of the Company and Mr. McMullen as Chief Financial Officer of the Company. Accordingly, the Board unanimously resolved, effective April 1, 2017, a) that Mr. Lane was appointed Chief Executive Officer of the Company; b) the employment agreement for Mr. Lane is ratified; c) Mr. McMullen was appointed Chief Financial Officer of the Company; and d) the employment agreement for Mr. McMullen is ratified by the Board.

Mr. Lane's employment agreement ("Lane Employment Agreement") with the Company is effective April 1, 2017, pursuant to which he will serve as the Company's Chief Executive Officer. The term ("Term") of the Lane Employment Agreement is two years. Annual base salary under the Lane Employment Agreement for the full Term is \$150,000. The Company will also issue options ("Options") to Mr. Lane to purchase 3,000,000 shares of restricted common stock of the Company. The Options shall vest pursuant to a two year vesting schedule, pursuant to which 500,000 of the Options, priced at \$0.15 per share, and 500,000 of the Options priced at \$0.25 per share, shall vest on April 1, 2018; thereafter, 1,000,000 of the Options, priced at \$0.30 per share and 1,000,000 of the Options priced at \$0.40 per share shall vest on April 1, 2019. The Options shall expire 10 years from the date of grant of the Options. Additionally, Mr. Lane will be entitled to a bonus for any leased-based contract for the Company's AOT technology sourced by Mr. Lane in the amount of 8% of gross cash flow in the first year of the Term and 6% of gross cash flow in the second year of the Term generated by any such leased-based contract sourced by Mr. Lane. For any sales or other non-leased contracts for the Company's AOT technology sourced by Mr. Lane, Mr. Lane shall receive a one-time payment of 10% of the net profit of any such sale or contract.

Mr. McMullen's employment agreement ("McMullen Employment Agreement") with the Company is effective April 1, 2017, pursuant to which he will serve as the Company's Chief Financial Officer. The term ("Term") of the McMullen Employment Agreement is two years. Annual base salary under the McMullen Employment Agreement for the full Term is \$158,400. The Company will also issue options ("Options") to Mr. McMullen to purchase 250,000 shares of restricted shares of common stock of the Company at a per share exercise price equal to the stock price listed on the OTCBB market at market close on April 3, 2017. The 125,000 of the Options shall vest on April 1, 2017, and 125,000 Options shall vest on April 1, 2018. The Options shall expire 10 years from the date of grant of the Options.

Mr. Bigger's separation agreement ("Bigger Separation Agreement") with the Company is effective April 1, 2017, pursuant to which his employment agreement with the Company is mutually terminated. Pursuant to the terms of Mr. Bigger's employment agreement, as amended, Mr. Bigger shall receive a termination payment equivalent to two (2) years' salary, totaling \$580,000 (the "Termination Payment"). The Termination Payment, as well as payment in lieu of accrued vacation and sick days, shall be paid in equal monthly installments over a period of two years, beginning on April 1, 2017. Under the terms of the Bigger Separation Agreement, Mr. Bigger and the Company also agree to a mutual release.

Copies of the aforementioned Employment Agreements for Mr. Lane and Mr. McMullen, and the Separation Agreement for Mr. Bigger are attached hereto as Exhibits 10.122, 10.123, and 10.124, respectively.

Bios for Mr. Lane, Dr. Bunting, and Mr. McMullen are as follows:

**Jason Lane, Chief Executive Officer and Chairman of the Board of the Company**

Jason Lane is a veteran of the oil and gas industry with a 20-year track record of procuring and divesting of oil and gas leases, mineral and royalty interests and production in the lower 48 States through his own partnerships and joint ventures. His most recent large transaction includes lease divestitures to Halcon Resources (Woodbine) and Terrace Energy LLC (Woodbine). Previously, Mr. Lane sold Rocky Mountain prospects to Bill Barrett Corp as well as multiple prospects to Chesapeake Energy across East Texas. Additionally, Mr. Lane has operated and or participated in the drilling of wells in Texas, Louisiana, Montana, and Wyoming. He has been the lead on all of his partnerships since 2002, with partners ranging from family offices to hedge funds.

During his career, Mr. Lane has been directly involved in the leasing of over 650,000 prime acres for his partnerships. Also in the royalty field, he has sold multiple royalty packages to NGP portfolio companies, Noble Royalties and other companies and funds. Mr. Lane has also managed up to a 125 Landman operation which was responsible for title and lease acquisition work for several significant companies throughout the United States.

**Eric Bunting, M.D., Director**

Eric Bunting, M.D. is a board-certified Ear, Nose, and Throat physician, and he is an owner and partner in an independent specialty group. This group has partnered with Wichita Surgical Specialist ("WSS"), which remains one of the country's largest surgical multispecialty groups. Dr. Bunting has been on the board of directors of WSS for the last 10 years. Dr. Bunting graduated from Kansas University School of Medicine and subsequently received specialty training at Kansas University Medical Center.

Dr. Bunting has many diverse business and entrepreneurial interests. Dr. Bunting has an interest in early startup companies and franchising opportunities. He is an owner and partner in approximately 40 fast-casual restaurant franchises in 10 states. He has board of director experience in the health care industry with multiple ambulatory surgical centers and a radiation center. Dr. Bunting has been an integral part of these boards through merger and acquisition periods. Other interests are in the wine and spirits industry where Dr. Bunting has been involved in a successful spirit start-up, which is poised for an acquisition opportunity. Dr. Bunting has other ongoing active business investments in the evolving internet artificial intelligence industry, as it relates to marketing and advertising.

Dr. Bunting has been an investor in the Company, acquiring a significant number of shares over the last four years. During this period, he has been and will remain an unbiased shareholder advocate looking forward to commercialization, deployment, and eventual profitability for the Company.

**Michael McMullen, Chief Financial Officer**

Mr. McMullen joined QS Energy in July 2013 as Controller. In this role, Mr. McMullen designed and managed implementation of the Company's Sarbanes-Oxley compliant internal controls and reporting procedures, and has been responsible for all financial operations and reporting. Mr. McMullen has extensive managerial and oversight experience in the areas of corporate governance, capitalization, asset valuation and risk assessment.

Prior to joining QS Energy, Mr. McMullen served in senior executive capacities across a variety of industries. As a management consultant and financial advisor to mid-market healthcare and technology entities, he specialized in providing growth and transition management oversight to companies serving hospitals and cancer centers. In his role as Director of Strategic Development at Leema Energy Resources he managed acquisition, valuation and due diligence cycles for the purchase and resale of energy-related assets acquired from distressed savings and loan institutions, resulting in sale-leaseback, leveraged buyout and resale transactions totaling \$150 million. At FloWind Corporation Mr. McMullen structured domestic power plant contracts, international joint venture agreements and equipment sales contracts in excess of \$200 million and was responsible for management of FloWind's \$7 million research program, resulting in the development of the company's next generation wind turbine technology. As CFO of SomethingNow, Inc. he was responsible for all finance and operations activities related to growing this internet company from start-up to commercial operations, resulting in the infusion of \$20M in capital, establishing key strategic relationships and ultimately negotiating and closing the sale of the company to a NASDAQ 100 company.

## PART III

### Item 10. Directors, Executive Officers and Corporate Governance

#### Composition of Board of Directors

Our bylaws provide that the Board shall consist of between one and eight directors, as determined by the Board from time to time. The Board consisted of six (6) members elected by the holders of the common stock at the Company's Meeting of Shareholders on June 19, 2015. Our directors are elected by our stockholders at each annual meeting of stockholders and will serve until their successors are elected and qualified, or until their earlier resignation or removal. Officers are appointed by our Board of Directors and their terms of office are, except to the extent governed by an employment contract, at the discretion of our Board of Directors. There are no family relationships among any of our current directors or our executive officers.

The following constitutes the Board of Directors as of December 31, 2016:

Name	Age	Position	Director Since
Greggory Bigger	48	Chief Executive Officer, Chief Financial Officer and Chairman, Director (Non-Independent)	2013
Charles R. Blum (1) (2) (3)	77	Director (Non-Independent)	2007
Donald Dickson(2)	59	Director (Independent)	2013
Nathan Shelton (1) (2) (3)	66	Director (Independent)	2007
Mark Stubbs (1)(2)	44	Director (Independent)	2013
Thomas Bundros(1)	60	Director (Independent)	2015

- (1) Member of the Audit Committee
- (2) Member of the Compensation Committee
- (3) Member of the Nominating and Corporate Governance Committee

#### **Biographical Information Regarding Directors**

**Greggory Bigger, President, CEO and CFO** (Non-Independent Director) was appointed to the Board of Directors on September 16, 2013. Gregg Bigger was most recently Founding Partner of Rocfin Advisors, a Strategic Management Consulting Company providing advice and direction to a variety of clients including companies in the energy, clean tech, and emerging technology markets. Prior, Mr. Bigger was Founder and Board Member of The Bank of Santa Barbara. Earlier in his career Mr. Bigger held a variety of key management and leadership positions including U.S. Trust as a Vice-President in the Private Client Group, and First Republic Bank as a Vice President and Manager in the Private Banking Group. Mr. Bigger also served in the United States Marine Corps' Special Operations in Amphibious Warfare and Cliff Assault.

**Charles R. Blum** (Non-Independent Director) was appointed on July 25, 2007 to the Board of directors and engaged as the President and Chief Executive Officer of the Company. In January 2010, Mr. Blum resigned as Chief Executive Officer of the Company, and thereafter resigned as President of the Company. Mr. Blum spent 22 years as the President/CEO of the Specialty Equipment Market Association (SEMA). SEMA is a trade group representing 6500 business members who are actively engaged in the manufacture and distribution of automotive parts and accessories. SEMA produces the world's largest automotive aftermarket Trade Show which is held annually in Las Vegas, Nevada. Mr. Blum led the association as its members grew from a handful of small entrepreneurial companies into an industry membership that sells over 31 billion dollars of product at the retail level annually. Mr. Blum has a proven record of accomplishment as a senior executive and brings a broad knowledge of the automotive aftermarket to the Company. Mr. Blum attended Rutgers University.

**Nathan Shelton** (Independent Director) has served as a director since February 12, 2007. Mr. Shelton has a long and distinguished career with a number of diverse successful companies primarily related to the automotive industry, holding prominent positions. In 1987 he joined K&N Engineering as President and part owner and built the company into an industry leader. In 2002 he sold his interest in K&N Engineering and founded S&S Marketing, which is engaged in the automotive aftermarket parts rep business, which he currently operates. Mr. Shelton is the recipient of numerous industry related prestigious awards, and in 1992, Specialty Equipment Market Association (SEMA) invited him to join its board of directors, which includes serving in capacity as its Chairman from 2002 to 2004. In 2007 he was elected to the SEMA "Hall of Fame". Mr. Shelton served honorably in the United States Seabees from 1968 to 1972. He attended Chaffey Junior College.

**Mark Stubbs** (Independent Director) was appointed to the Board of Directors and Chairman of the Audit Committee on July 3, 2013. Mr. Stubbs currently serves as Chief Financial Officer for London Stock Exchange listed BBA Aviation's Aftermarket Services Division, a leading global aviation services and aftermarket support provider. Prior to joining BBA in 2012, Mr. Stubbs served as Chief Financial Officer and Interim Chief Executive Officer for CallWave, Inc., which was then a NASDAQ-listed company and a global provider of enhanced telecommunications software and services. From 2005 to 2006, Mr. Stubbs was Chief Financial Officer of Sound ID, a privately held consumer electronics company. Prior to Sound ID, Mr. Stubbs held a number of executive positions including Vice President Global Supply Chain and Vice President and Managing Director EMEA (Europe, Middle East and Africa) at Somera, Inc., which at the time was a NASDAQ-listed company and a leading global provider of telecommunications infrastructure and services. Previously, Mr. Stubbs held a number of financial management positions at Kinko's Inc., which has since been acquired by NYSE-listed FedEx. Mr. Stubbs earned a BA in Finance and MBA from Cal Poly San Luis Obispo and is a Certified Public Account (CPA).

**Don Dickson** (Independent Director), appointed to Board of Directors on August 6, 2013, and currently is employed with Kinder Morgan, Inc. working on the Northeast Energy Direct Project, after finishing the Cortez Expansion project as project manager / engineering principal / construction support. The NED project will serve the Northeast United States delivering natural gas to the region, while the Cortez expansion project will increase the volume of CO2 being shipped from Southwest Colorado to West Texas for oil recovery. Prior to rejoining Kinder Morgan Mr. Dickson served as Chief Executive Officer for Advanced Pipeline Services (APS). APS was established for the purpose of providing a full range of services to the oil and gas industry. Core business areas are in new construction of pipeline and facilities, horizontal directional drilling and pipeline integrity/rehabilitation. Prior to APS, Mr. Dickson worked for Kinder Morgan in their natural gas operations, retiring after twenty-six years. During his time at Kinder Morgan served in different engineering capacities including as Director of Operations on two major pipeline projects, the 42" (REX) Rockies Mountain Express through the state of Illinois, and the 42" (MEP) Midcontinent Express Pipeline through the state of Louisiana. He also was Director of Operations with Tetra Resources completing various onshore and offshore oil and gas wells and a Senior Engineer with Halliburton Services. Mr. Dickson earned his B.S. in Engineering from Oklahoma State University.

**Thomas Bundros** (Independent Director), was appointed to the Board of Directors effective January 5, 2015. Mr. Bundros served as Chief Financial Officer at Colonial Pipeline Company from July 2009 to September 2012, the world's largest pipeline operator transporting 100 million gallons of refined petroleum products daily across 5,500 miles of pipeline. Mr. Bundros currently holds the post of Chief Executive Officer of Dalton Utilities (January 2016 to present), a provider of electricity, natural gas, water and telecommunications services to the city of Dalton and portions of northwest Georgia. Prior to his appointment as Chief Executive Officer, Mr. Bundros had served as Dalton Utilities' Chief Operations Officer for Dalton Utilities since October 2012. Mr. Bundros was Chief Financial Officer of Dalton Utilities from January 1997 to June 2009. Prior to Dalton Utilities, Mr. Bundros also held various financial positions in the Atlanta and New York offices of the Southern Company System, the 16th largest utility company in the world and the fourth largest in the U.S. with over 4 million customers in Alabama, Georgia, Florida, and Mississippi. He earned his Master of Business Administration in Finance and Bachelor of Science in Economics and Business Administration at the University of North Carolina at Greensboro.

#### **Director Compensation Policy**

Effective January 1, 2014, the Board passed a resolution suspending the July 1, 2013 Board compensation policy. Effective May 6, 2014, the Board approved a compensation policy which includes two annual grants of options, including i) an option to purchase a number of shares of common stock equal to \$25,000 divided by the per share closing price on the date of grant with an exercise price equal to the stock closing price on the date of grant, a one year vesting period and an expiration date 10 years from the date of grant; and ii) an option to purchase a number of shares of common stock equal to \$25,000 divided by the per share fair market value of the option calculated using the Black-Scholes Option Pricing Model based on market conditions, including stock closing price, risk free interest rate and stock volatility, on the date of grant with an exercise price equal to the stock closing price on the date of grant, vesting immediately and an expiration date 10 years from the date of grant. Also, effective July 1, 2013, the Board approved an annual grant of options to purchase 25,000 shares of common stock at a price equal to the stock's closing price on the date of grant, vesting immediately and expiring 10 years from the date of grant as compensation to the chairman of the Board's Audit Committee. Effective January 1, 2015, the Board amended the policy such that there is only one annual grant as follows: i) all options granted would vest over one year; and ii) options granted mid-year due to appointment to the Board or appointment to Chairman of the Audit Committee would be adjusted such that the number of shares would be calculated on a pro rata basis depending on the number of day remaining in the calendar year, and the options would vest December 31 of the year of grant.

## Executive Officers

The following table sets forth certain information regarding our executive officers as of December 31, 2016:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Greggory M. Bigger	48	Chief Executive Officer, Chief Financial Officer and President

For the biography of Greggory Bigger, please see above under “Biographical Information Regarding Directors.”

## CORPORATE GOVERNANCE

We maintain a corporate governance page on our corporate website at [www.qsenergy.com](http://www.qsenergy.com), which includes information regarding the Company’s corporate governance practices. Our codes of business conduct and ethics, Board committee charters and certain other corporate governance documents and policies are posted on our website. In addition, we will provide a copy of any of these documents without charge to any stockholder upon written request made to Corporate Secretary, QS Energy, Inc., 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111. The information on our website is not, and shall not be deemed to be, a part of this form 10-K or incorporated by reference into this or any other filing we make with the Securities and Exchange Commission (the “SEC”).

### Board of Directors

#### Director Independence

Our Board of Directors as of December 31, 2016, consisted of six (6) members. As of that date, the Board has affirmatively determined that Mr. Dickson, Mr. Shelton, Mr. Stubbs and Mr. Bundros are independent directors. Mr. Bigger, our President, Chief Executive Officer, and Chief Financial Officer and Mr. Blum, former Chief Executive Officer, are not considered independent.

Effective January 5, 2015, Thomas A. Bundros was elected to the Company’s Board of Directors. As of that date, the Board has affirmatively determined that Mr. Bundros is an independent director.

#### Meetings of the Board

The Board held four (4) meetings in 2016. A majority of the members attended all 4 board meetings held in 2016. The Board has held five (5) meetings in 2017 as of the date of this report.

#### Communications with the Board

The following procedures have been established by the Board in order to facilitate communications between our stockholders and the Board:

Stockholders may send correspondence, which should indicate that the sender is a stockholder, to the Board or to any individual director, by mail to Corporate Secretary, QS Energy, Inc. 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111 or by e-mail to [info@qsenergy.com](mailto:info@qsenergy.com).

Our Secretary will be responsible for the first review and logging of this correspondence and will forward the communication to the director or directors to whom it is addressed unless it is a type of correspondence which the Board has identified as correspondence which may be retained in our files and not sent to directors. The Board has authorized the Secretary to retain and not send to directors communications that: (a) are advertising or promotional in nature (offering goods or services), (b) solely relate to complaints by customers with respect to ordinary course of business customer service and satisfaction issues or (c) clearly are unrelated to our business, industry, management or Board or committee matters. These types of communications will be logged and filed but not circulated to directors. Except as set forth in the preceding sentence, the Secretary will not screen communications sent to directors.

The log of stockholder correspondence will be available to members of the Board for inspection. At least once each year, the Secretary will provide to the Board a summary of the communications received from stockholders, including the communications not sent to directors in accordance with the procedures set forth above.

Our shareholders may also communicate directly with the non-management directors, individually or as a group, by mail c/o Corporate Secretary, QS Energy, Inc., 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111 or by e-mail to [info@qsenegy.com](mailto:info@qsenegy.com).

The Audit Committee has established procedures, as outlined in the Company's policy for "Procedures for Accounting and Auditing Matters", for the receipt, retention and treatment of complaints regarding questionable accounting, internal controls, and financial improprieties or auditing matters. Any of the Company's employees may confidentially communicate concerns about any of these matters by calling our toll-free number, +1 (844) OIL-QSEP, (+1 (844) 645-7737). Upon receipt of a complaint or concern, a determination will be made whether it pertains to accounting, internal controls or auditing matters and if it does, it will be handled in accordance with the procedures established by the Audit Committee.

### **Committees of the Board**

The Board has a standing Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee. Each of these committees operates under a written charter. Copies of these charters, and other corporate governance documents, are available on our website, [www.qsenegy.com](http://www.qsenegy.com). In addition, we will provide a copy of any of these documents without charge to any stockholder upon written request made to Corporate Secretary, QS Energy Inc., 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111.

The composition, functions and general responsibilities of each committee are summarized below.

#### **Audit Committee**

The Audit Committee currently consists of Mr. Stubbs (chairperson), Mr. Blum, Mr. Shelton and Mr. Bundros. The Board has determined that Mr. Stubbs, Mr. Shelton and Mr. Bundros are considered independent under rules of the SEC. The Audit Committee held a total of four (4) meetings during 2016, each attended by a majority of Audit Committee members. The Audit Committee has met once during 2017 as of the date of this report.

The Audit Committee operates under a written charter. The Audit Committee's duties include responsibility for reviewing our accounting practices and audit procedures. In addition, the Audit Committee has responsibility for reviewing complaints about, and investigating allegations of, financial impropriety or misconduct. The Audit Committee works closely with management and our independent auditors. The Audit Committee also meets with our independent auditors on a quarterly basis, following completion of their quarterly reviews and annual audit, to review the results of their work. The Audit Committee also meets with our independent auditors to approve the annual scope of the audit services to be performed.

As part of its responsibility, the Audit Committee is responsible for engaging our independent auditor, as well as pre-approving audit and non-audit services performed by our independent auditor in order to assure that the provision of such services does not impair the independent auditor's independence.

See "Audit Committee Report" below, which provides further details of many of the duties and responsibilities of the Audit Committee.

#### **Compensation Committee**

The Compensation Committee consists of Mr. Blum (chairperson), Mr. Stubbs, Mr. Shelton and Mr. Dickson. The Board has determined that Mr. Stubbs, Mr. Shelton and Mr. Dickson are independent. The Compensation Committee held no meetings during 2015 and has not met during 2016 as of the date of this report.

The Compensation Committee administers the Company's executive compensation program. The Compensation Committee has the authority to review and determine the salaries and bonuses of the executive officers of the Company, including the Chief Executive Officer and the other executive officers named in the Summary Compensation Table (the "Named Executive Officers") appearing elsewhere in this 10-K, and to establish the general compensation policies for such individuals.

The Compensation Committee operates under a written charter. The charter reflects these various responsibilities, and the Committee is charged with periodically reviewing the charter. In addition, the Committee has the authority to engage the services of outside advisors, experts and others, including independent compensation consultants who do not advise the Company, to assist the Committee.

See “Compensation Committee Report” below, which provides further details of many of the duties and responsibilities of the Compensation Committee.

#### **Nominating and Governance Committee**

The Nominating and Corporate Governance Committee consists of Mr. Shelton (chairperson) and Mr. Blum. The Board believes that Mr. Shelton meets independent requirements under rules of the SEC. The Nominating and Corporate Governance Committee held no meetings during 2016 and has not met during 2017 as of the date of this report.

The Nominating and Corporate Governance Committee operates under a written charter. The Nominating and Corporate Governance Committee has the primary responsibility for overseeing the Company’s corporate governance compliance practices, as well as supervising the affairs of the Company as they relate to the nomination of directors. The principal ongoing functions of the Nominating and Corporate Governance Committee include developing criteria for selecting new directors, establishing and monitoring procedures for the receipt and consideration of director nominations by stockholders and others, considering and examining director candidates, developing and recommending corporate governance principles for the Company and monitoring the Company’s compliance with these principles and establishing and monitoring procedures for the receipt of stockholder communications directed to the Board.

The Nominating and Corporate Governance Committee is also responsible for conducting an annual evaluation of the Board to determine whether the Board and its committees are functioning effectively. In performing this evaluation, the Nominating and Corporate Governance Committee receives comments from all directors and reports annually to the Board with the results of this evaluation.

See “Nominating and Governance Committee Report” below, which provides further details of many of the duties and responsibilities of the Nominating and Governance Committee.

### **AUDIT COMMITTEE REPORT**

The Audit Committee is currently composed of four (4) directors, Mr. Stubbs (Chairperson), Mr. Charles R. Blum, Mr. Bundros and Mr. Shelton. The Board has determined that Mr. Stubbs, Mr. Bundros and Mr. Shelton are considered independent within the rules of the SEC. The duties and responsibilities of a member of the Audit Committee are in addition to his duties as a member of the Board.

The Audit Committee operates under a written charter, which is available on the Company’s website. The Board and the Audit Committee believe that the Audit Committee charter complies with the current standards set forth in SEC regulations. There may be further action by the SEC during the current year on several matters that affect all audit committees. The Board and the Audit Committee continue to follow closely further developments by the SEC in the area of the functions of audit committees, particularly as it relates to internal controls for non-accelerated filers, and will make additional changes to the Audit Committee charter and the policies of the Audit Committee as required or advisable as a result of these new rules and regulations. The Audit Committee met four (4) times during 2016 and each was attended by a majority of committee members. The Audit Committee has met once during 2017 as of the date of this report.

The Audit Committee’s primary duties and responsibilities are to:

- engage the Company’s independent auditor;
- monitor the independent auditor’s independence, qualifications and performance;
- pre-approve all audit and non-audit services;

Management is responsible for the Company's internal controls and the financial reporting process. The Company's independent auditor is responsible for performing an independent audit of the Company's financial statements in accordance with the standards of the Public Company Accounting Oversight Board and issuing a report thereon. The Audit Committee's responsibility is to monitor and oversee these processes.

In February 2012, the Company began the process of designing and implementing various financial controls from within our finance department under the supervision of the Company's Chief Executive Officer and Chief Financial Officer. Furthermore, the Company also hired an outside consultant to further enhance these internal controls, policies and procedures. On March 19, 2013, the Company's Board of Directors approved and began the implementation of these internal controls, policies and procedures. In June 2013, the Company began the process of designing and implementing additional internal controls based on a continuous process of assessment and improvement under which board and management financial reporting objectives were defined and implemented, policies and procedures were tested for effectiveness and deficiencies were identified and remediated. On December 16, 2013, the Board of Directors approved a revised Internal Controls Policy based on policy refinements and improvements implemented under this assessment process. Additional controls and policies designed and implemented in second and third quarters of 2013 have been tested and identified deficiencies have been remediated. The Internal Controls Policy and Sarbanes-Oxley 302 matrix approved by the Board of Directors on March 19, 2013, as revised and approved by the board on December 16, 2013, have been implemented and are functioning as planned.

Our management evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act") were effective as of September 30, 2013 and continue to be effective as of the date of this report.

Our Chief Executive Officer, Chief Financial Officer and Controller conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2016 based on the framework in Internal Control – Integrated Framework ("2013 Framework") issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our internal controls over financial reporting (as defined in Rules 13a-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act") were effective as of December 31, 2016.

With respect to the Company's independent auditors, the Audit Committee, among other things, discussed with Weinberg & Co., P.A., matters relating to its independence, including the written disclosures made to the Audit Committee as required by the Independence Standards Board Standard No. 1 (Independence Discussions with Audit Committees). The Audit Committee also reviewed and approved the audit and non-audit fees of that firm.

On the basis of these reviews and discussions, the Audit Committee (i) appointed Weinberg & Co., P.A. as the independent registered public accounting firm for the 2016 fiscal year and (ii) recommended to the Board that the Board approve the inclusion of the Company's audited financial statements in the 10-K for filing with the SEC.

Respectfully submitted:

Mark Stubbs (Chairman)

## COMPENSATION COMMITTEE REPORT

The Compensation Committee has furnished this report on executive compensation for the 2016 fiscal year.

The Compensation Committee administers the Company's executive compensation program. The Compensation Committee has the authority to review and determine the salaries and bonuses of the executive officers of the Company, including the Chief Executive Officer and the other executive officers named in the Summary Compensation Table (the "Named Executive Officers") appearing elsewhere in this 10-K, and to establish the general compensation policies for such individuals.

The Compensation Committee currently consists of Mr. Blum (chairperson), Mr. Stubbs, Mr. Dickson and Mr. Shelton. The Board believes that Messrs. Stubbs, Dickson and Shelton are independent. None of our executive officers served on the compensation committee of another entity or on any other committee of the board of directors of another entity performing similar functions during 2016. The Compensation Committee held no meetings during 2016 and has not met during 2016 as of the date of this report.

The Compensation Committee operates under a written charter. The charter reflects these various responsibilities, and the Committee is charged with periodically reviewing the charter. In addition, the Committee has the authority to engage the services of outside advisors, experts and others, including independent compensation consultants who do not advise the Company, to assist the Committee.

The Compensation Committee believes that the compensation programs for the Company's executive officers should reflect the Company's performance and the value created for the Company's stockholders. In addition, the compensation programs should support the short-term and long-term strategic goals and values of the Company, reward individual contribution to the Company's success and align the interests of the Company's officers with the interests of its stockholders. The committee believes that the Company's success depends upon its ability to attract and retain qualified executives through the competitive compensation packages it offers to such individuals.

The principal factors that were taken into account in establishing each executive officer's compensation package for the 2016 fiscal year are described below. However, the Compensation Committee may in its discretion apply entirely different factors, such as different measures of financial performance, for future fiscal years. Moreover, all of the Company's Named Executive Officers have entered into employment agreements with the Company and many components of each such person's compensation are set by such agreements.

**Equity-Based Compensation.** The Committee believes in linking long-term incentives to an increase in stock value. Accordingly, it awards stock options with an exercise price equal to the fair market value of the underlying stock on the date of grant that vest and become exercisable over time. The Committee believes that these options encourage employees to continue to use their best efforts and to remain in the Company's employment. Options granted to executive officers generally vest and become exercisable in annual 25% increments over a four-year period after grant.

The Committee relies substantially on management of the Company to make specific recommendations regarding which individuals should receive option grants and the amounts of such grants.

The Company grants stock options to executive officers with a cumulative option price of up to \$100,000 as incentive stock options and the remainder as non-qualified stock options, both with an exercise price equal to the fair market value of the Company's common stock on the date of grant. Accordingly, those stock options will have value only if the market price of the Company's common stock increases after that date. In determining the size of stock option grants to executive officers, the Committee bases its decisions on such considerations as similar awards to individuals holding comparable positions in our comparative groups, company performance and individual performance, as well as the allocation of overall share usage attributed to executive officers.

Compliance with Code Section 162(m). Section 162(m) of the Code disallows a tax deduction to publicly-held companies for compensation paid to certain of their executive officers, to the extent that compensation exceeds \$1 million per covered officer in any fiscal year. The limitation applies only to compensation which is not considered to be performance based. Non-performance based compensation paid to the Company's executive officers for the 2016 fiscal year did not exceed the \$1 million limit per officer, and the Compensation Committee does not anticipate that the non-performance based compensation to be paid to the Company's executive officers for the 2017 fiscal year will exceed that limit. Because it is unlikely that the cash compensation payable to any of the Company's executive officers in the foreseeable future will approach the \$1 million limit, the Compensation Committee has decided at this time not to take any action to limit or restructure the elements of cash compensation payable to the Company's executive officers. The Compensation Committee will reconsider this decision should the individual cash non-performance based compensation of any executive officer ever approach the \$1 million level.

The Board did not modify any action or recommendation made by the Compensation Committee with respect to executive compensation for the 2016 fiscal year. It is the opinion of the Compensation Committee that the executive compensation policies and plans provide the necessary total remuneration program to properly align the Company's performance and the interests of the Company's stockholders through the use of competitive and equitable executive compensation in a balanced and reasonable manner, for both the short and long term.

Respectfully submitted by:

Charles Blum, Chairman

## NOMINATING AND CORPORATE GOVERNANCE COMMITTEE REPORT

The Nominating and Corporate Governance Committee currently consists of Mr. Shelton (chairperson) and Mr. Blum. The Board believes that Mr. Shelton meet independent requirements under rules of the SEC. The Nominating and Corporate Governance Committee held no meetings during 2016 and has not met during 2017 as of the date of this report.

The Nominating and Corporate Governance Committee operates under a written charter. The Nominating and Corporate Governance Committee has the primary responsibility for overseeing the Company's corporate governance compliance practices, as well as supervising the affairs of the Company as they relate to the nomination of directors. The principal ongoing functions of the Nominating and Corporate Governance Committee include developing criteria for selecting new directors, establishing and monitoring procedures for the receipt and consideration of director nominations by stockholders and others, considering and examining director candidates, developing and recommending corporate governance principles for the Company and monitoring the Company's compliance with these principles and establishing and monitoring procedures for the receipt of stockholder communications directed to the Board.

The Nominating and Corporate Governance Committee is also responsible for conducting an annual evaluation of the Board to determine whether the Board and its committees are functioning effectively. In performing this evaluation, the Nominating and Corporate Governance Committee receives comments from all directors and reports annually to the Board with the results of this evaluation.

### Director Nominations

The Nominating and Corporate Governance Committee seeks out appropriate candidates to serve as directors of the Company, and the Nominating and Corporate Governance Committee interviews and examines director candidates and makes recommendations to the Board regarding candidate selection. In considering candidates to serve as director, the Nominating and Corporate Governance Committee evaluates various minimum individual qualifications, including strength of character, maturity of judgment, relevant technical skills or financial acumen, diversity of viewpoint and industry knowledge, as well as the extent to which the candidate would fill a present need on the Board.

The Nominating and Corporate Governance Committee will consider, without commitment, stockholder nominations for director. Nominations for director submitted to this committee by stockholders are evaluated according to the Company's overall needs and the nominee's knowledge, experience and background. A nominating stockholder must give appropriate notice to the Company of the nomination not less than 90 days prior to the first anniversary of the preceding year's annual meeting. In the event that the date of the annual meeting is advanced by more than 30 days or delayed by more than 60 days from the anniversary date of the preceding year's annual meeting, the notice by the stockholder must be delivered not later than the close of business on the later of the 60th day prior to such annual meeting or the tenth day following the day on which public announcement of the date of such annual meeting is first made.

The stockholders' notice shall set forth, as to:

- each person whom the stockholder proposes to nominate for election as a director:
- the name, age, business address and residence address of such person,
- the principal occupation or employment of the person,
- the class and number of shares of the Company which are beneficially owned by such person, if any, and
- any other information relating to such person which is required to be disclosed in solicitations for proxies for election of directors pursuant to Regulation 14A under the Exchange Act and the rules hereunder; and the stockholder giving the notice

- the name and record address of the stockholder and the class and number of shares of the Company which are beneficially owned by the stockholder,
- a description of all arrangements or understandings between such stockholder and each proposed nominee and any other person or persons (including their names) pursuant to which nomination(s) are to be made by such stockholder,
- a representation that such stockholder intends to appear in person or by proxy at the meeting to nominate the persons named in its notice,
- any other information relating to such person which is required to be disclosed in solicitations for proxies for election of directors pursuant to Regulation 14A under the Exchange Act and the rules thereunder.

The notice must be accompanied by a written consent of the proposed nominee to be named as a director.

We have adopted codes of business conduct and ethics for our directors, officers and employees, which we believe meet requirements of a code of ethics. You can access the Company's Code of Business Conduct and Ethics and our Code of Ethics for Senior Executives and Financial Officers on the Corporate Governance page of the Company's website at [www.qsenergy.com](http://www.qsenergy.com). Any shareholder who so requests may obtain a printed copy of the Code of Conduct by submitting a request to the Company's Corporate Secretary.

Respectfully submitted by:

Nathan Shelton, Chairman

## Item 11. Executive Compensation

### EXECUTIVE COMPENSATION DISCUSSION AND ANALYSIS

The following table sets forth certain information regarding the compensation earned during the last three fiscal years by the Named Executive Officers:

**Summary Compensation Table**

Name and Principal Position	Fiscal Year	Annual Compensation Salary (\$)	Stock Awards (\$)	Long-Term Compensation Awards			Total (\$)
				Securities Underlying Options (#)	Full Value of Options (\$)	All Other Compensation (\$)	
Greggory Bigger (1) (2) President, Chief Executive Officer and Chief Financial Officer	2016	\$ 290,000	\$ –	–	\$ –	\$ –	\$ 290,000
	2015	\$ 290,000	\$ –	–	\$ –	\$ –	\$ 290,000

- (1) On February 1, 2012, Mr. Bigger was appointed Chief Financial Officer. In 2012, Mr. Bigger received options for 4,000,000 exercisable at \$0.25 per share, vesting over four years. Of the 4,000,000 options, 500,000 vested on February 1, 2012, 500,000 vested on February 1 2013, 1,000,000 vested on February 1, 2014, 1,000,000 vested on February 1, 2015, and 1,000,000 vested on February 1, 2016. On March 10, 2016, the Board of Directors agreed to amend Mr. Bigger's employment contract, effective March 10, 2016, such that the contract will terminate on March 8, 2019, the business day immediately preceding the third anniversary of the effective date of the amendment. Prior to this amendment, Mr. Bigger's contract was scheduled to terminate on January 31, 2017, subject to automatic one-year extensions of the contract. A copy of this contract amendment was attached to our Form 10-K filed March 16, 2016 as Exhibit 10.120.
- (2) Mr. Bigger also received stock options as a member of the Board of Directors of the Company. See section below labeled, "Director Compensation".

#### OPTION GRANTS IN LAST FISCAL YEAR

No options were granted to Named Executive Officers during the 2016 fiscal year as executive compensation; however, options were granted to Greggory Bigger under the Company's Board of Directors compensation policy as detailed in the Director Compensation section below.

#### AGGREGATED OPTION EXERCISES IN LAST FISCAL YEAR AND YEAR-END OPTION VALUES

No options were exercised by any of the Named Executive Officers during the 2016 fiscal year. The following table sets forth the number of shares of our common stock subject to exercisable and unexercisable stock options which the Named Executive Officers held at the end of the 2016 fiscal year.

Name	Shares Acquired on Exercise (#)	Value Realized (\$)	Number of Securities Underlying Unexercised Options at Fiscal Year-End (#)		Value of Unexercised In-the-Money Options (\$)(1)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Greggory Bigger	\$ –	\$ –	4,462,592	4,462,592	\$ –	\$ –

(1) Market value of our common stock at fiscal year-end minus the exercise price. The closing price of our common stock on December 31, 2016 the last trading day of the year was \$0.05 per share.

## EMPLOYMENT AGREEMENTS

### **Employment Agreement with Gregory M. Bigger**

On February 1, 2012, the Company entered into an employment agreement with Gregory M. Bigger, pursuant to which he agreed to serve as the Company's Chief Financial Officer. The initial term of the agreement commenced February 1, 2012, and continues for one (1) year. Thereafter, the agreement is renewable for successive one (1) year periods, unless either party gives written notice of non-renewal, no later than sixty (60) days prior to the renewal date. The agreement provides for the payment of a one-time acceptance bonus of \$10,000. Base salary under the agreement is \$10,000 per month, plus an automobile allowance of \$900 per month and other benefits generally available to senior employees of the Company. In addition, the Company also granted Mr. Bigger an option to purchase 4,000,000 shares of common stock at \$0.25/share (See Note 10 of the Company's Financial Statement). The options were granted on February 1, 2012 and will expire ten years from date of grant. The options vest subject to Mr. Bigger's continued employment over a period of four years, with 500,000 shares vesting immediately upon grant, 500,000 shares vesting on February 1, 2013, and three tranches of 1,000,000 shares each vesting on February 1, 2014, 2015 and 2016. On April 30, 2012, the Company raised Mr. Bigger's salary to \$15,000 per month for his extraordinary leadership and loyalty. On September 1, 2012, his salary was increased to \$20,000 per month for accepting the position of President of the Company in addition to being the Chief Financial Officer.

### **Amendment #1 to Bigger Employment Agreement**

Effective September 1, 2013, Mr. Bigger's Employment Agreement, in recognition of his additional responsibilities as President of the Company, was amended, as follows:

(i) Annual Base Salary for Mr. Bigger was increased to \$290,000. Mr. Bigger is also eligible to receive an annual cash bonus, within the discretion of the Company's Board. In exercising its discretion, the Board shall consider, among other things, the Company's: (a) revenue; (b) earnings; (c) contracts; (d) cash position; (e) liquidity; (f) customers; (g) NASDAQ or other exchange listings; (h) market capitalization; (i) general financial condition; and (j) achievement of goals set forth in management's yearly budgets, plans and projections. Any award of bonus shall be paid no later than forty-five (45) days following the filing of the Company's Form 10-K.

(ii) Additionally, in the event any person, including all affiliates of such person, directly or indirectly, becomes the beneficial owner of 50% or more of the combined voting power of the Company's outstanding shares, and otherwise on a Change of Control event as defined in Mr. Bigger's Employment Agreement, Mr. Bigger's Employment Agreement and all amendments thereto shall be terminated whereupon Mr. Bigger shall be paid an amount equal to two (2) times his annual Base Salary as in effect on the date of the Change of Control event, and all of Mr. Bigger's unvested stock options and warrants shall immediately vest effective on the date of the Change of Control event.

(iii) Additionally, if Mr. Bigger is terminated by the Company without cause or if he resigns for "good reason," he shall be paid an amount equal to three (3) times his annual Base Salary as in effect on the date of the termination, payable, at the discretion of the Company, in one lump sum or in equal monthly installments during a term not to exceed thirty-six (36) months, less applicable withholding taxes. Additionally, all of Mr. Bigger's unvested options and warrants shall vest to the same extent as he would have become vested if he had remained employed by the Company for an additional three (3) years. "Good Reason" shall be defined to mean any reduction in Mr. Bigger's then current annual Base Salary of ten percent (10%) or more, or relocation of the Company's principal executive office to a location more than twenty-five (25) miles outside of Santa Barbara, California, or a substantial change in Mr. Bigger's then current duties and responsibilities.

(iv) Additionally, in the event of Mr. Bigger's termination for Cause, Mr. Bigger shall be entitled to receive only his Base Salary accrued through the date of such termination, and nothing more, and all of Mr. Bigger's unvested options and warrants shall be canceled.

### **Amendment #2 to Bigger Employment Agreement**

On March 10, 2016, the Board of Directors agreed to amend Mr. Bigger's employment contract, effective March 10, 2016, such that the contract will terminate on March 8, 2019, the business day immediately preceding the third anniversary of the effective date of the amendment. Prior to this amendment, Mr. Bigger's contract was scheduled to terminate on January 31, 2017, subject to automatic one-year extensions of the contract. A copy of this contract amendment was attached to our Form 10-K filed March 16, 2016 as Exhibit 10.120.

See Item 9B above for more information regarding Mr. Bigger's employment agreement.

## DIRECTORS COMPENSATION

During the year ended December 31, 2016, the Company granted options to purchase 738,552 shares of common stock to members of the Board of Directors under a new Board of Directors compensation policy adopted by the Company on May 6, 2014 and as amended effective January 1, 2015. The options are exercisable at \$0.48/share and \$0.46/share and expire ten years from the date of grant. A total of 738,552 options vested on December 31, 2015. Total fair value of these options at grant date was approximately \$296,787 using the Black-Scholes Option Pricing model with the following assumptions: life of 5 years; risk free interest rate of 1.72% and 1.67%; volatility of 121% and dividend yield of 0%.

The table below summarizes the compensation paid by the Company to its directors for the fiscal year ended December 31, 2015.

Name	Fees earned or paid in cash (1) (\$)	Stock Awards (\$)	Option Awards (2) (\$)	Non-Equity Incentive Plan Compensation (\$)	Change in Pension Value and Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
Gregg Bigger (3)	–	–	\$ 42,100	–	–	–	\$ 42,100
Charles Blum (4)	\$ 6,000	–	42,100	–	–	–	48,100
Donald Dickson (5)	6,000	–	42,100	–	–	–	48,100
Nathan Shelton (6)	6,000	–	42,100	–	–	–	48,100
Mark Stubbs (7)	6,000	–	63,100	–	–	–	69,100
Thomas Bundros (8)	6,000	–	42,100	–	–	–	48,100

- (1) Effective July 1, 2013, the Board approved a compensation policy which includes a \$500 monthly fee paid to any member of the Board of Directors who serves on a Board Committee. Effective May 6, 2014, the Board approved a revised compensation policy which continued this \$500 monthly fee.
- (2) Effective January 1, 2014, the Board passed a resolution suspending the July 1, 2013 Board compensation policy. Effective May 6, 2014, the Board approved a compensation policy which includes two annual grants of options, including i) an option to purchase a number of shares of common stock equal to \$25,000 divided by the per share closing price on the date of grant with an exercise price equal to the stock closing price on the date of grant, a one year vesting period and an expiration date 10 years from the date of grant; and ii) an option to purchase a number of shares of common stock equal to \$25,000 divided by the per share fair market value of the option calculated using the Black-Scholes Option Pricing Model based on market conditions, including stock closing price, risk free interest rate and stock volatility, on the date of grant with an exercise price equal to the stock closing price on the date of grant, vesting immediately and an expiration date 10 years from the date of grant. Also, effective July 1, 2013, the Board approved an annual grant of options to purchase 25,000 shares of common stock at a price equal to the stock's closing price on the date of grant, vesting immediately and expiring 10 years from the date of grant as compensation to the chairman of the Board's Audit Committee. Effective January 1, 2015, the Board amended the policy such that i) all options granted would vest over one year; and ii) options granted mid-year due to appointment to the Board or appointment to Chairman of the Audit Committee would be adjusted such that the number of shares would be calculated on a pro rata basis depending on the number of day remaining in the calendar year, and the options would vest December 31 of the year of grant.
- (3) On January 1, 2016, Mr. Bigger was granted options to purchase 253,158 shares of common exercisable at \$0.19/share, vesting on December 31, 2015 and expiring ten years from the date of grant. Total fair value of these options at grant date was approximately \$42,100 using Black-Scholes Option Pricing. During the year ended December 31, 2016, the Company recognized compensation costs of \$42,100 based on the fair value of Mr. Bigger's options that vested.

- (4) Mr. Blum serves as chairman of the Compensation Committee and as a member of the Audit Committee and the Governance and Nominating Committee. As a member of a Board Committee, Mr. Blum received compensation in the amount of \$500 per month for the twelve-month period of January 1, 2015 through December 31, 2015. On January 1, 2015, was granted options to purchase 253,158 shares of common exercisable at \$0.19/share, vesting on December 31, 2015 and expiring ten years from the date of grant. Total fair value of these options at grant date was approximately \$42,100 using Black-Scholes Option Pricing. During the year ended December 31, 2016, the Company recognized compensation costs of \$42,100 based on the fair value of Mr. Blum's options that vested and \$6,000 for Mr. Blum's Board Committee fees.
- (5) Effective July 1, 2015, Mr. Dickson was appointed to the Compensation Committee. As a member of a Board Committee, Mr. Dickson received compensation in the amount of \$500 per month for the six-month period of July 1, 2015 through December 31, 2015. On January 1, 2015, Mr. Dickson was granted options to purchase 253,158 shares of common exercisable at \$0.19/share, vesting on December 31, 2015 and expiring ten years from the date of grant. Total fair value of these options at grant date was approximately \$42,100 using Black-Scholes Option Pricing. During the year ended December 31, 2016, the Company recognized compensation costs of \$42,100 based on the fair value of Mr. Dickson's options that vested.
- (6) Mr. Shelton serves as chairman of the Compensation Committee and as a member of the Audit Committee and the Governance and Nominating Committee. As a member of a Board Committee, Mr. Shelton received compensation in the amount of \$500 per month for the twelve-month period of January 1, 2014 through December 31, 2014. On May 6, 2014, Mr. Shelton was granted options to purchase 253,158 shares of common exercisable at \$0.19/share, vesting on December 31, 2015 and expiring ten years from the date of grant. Total fair value of these options at grant date was approximately \$42,100 using Black-Scholes Option Pricing. During the year ended December 31, 2016, the Company recognized compensation costs of \$42,100 based on the fair value of and \$6,000 for Mr. Shelton's Board Committee fees.
- (7) Mr. Stubbs serves as chairman of the Audit Committee and as a member of the Compensation Committee. As a member of a Board Committee, Mr. Stubbs received compensation in the amount of \$500 per month for the twelve-month period of January 1, 2016 through December 31, 2016. On January 1, 2016, Mr. Stubbs was granted options to purchase 253,158 shares of common exercisable at \$0.19/share, vesting on December 31, 2016 and expiring ten years from the date of grant. Total fair value of these options at grant date was approximately \$42,100 using Black-Scholes Option Pricing. As chairman of the Audit Committee, Mr. Stubbs received an additional grant of options on January 1, 2016 to purchase 131,579 shares of common stock valued at \$21,000 using Black-Scholes Option Pricing. These options are exercisable at \$0.19/share, vesting on December 31, 2016 and expire ten years from the date of grant. During the year ended December 31, 2016, the Company recognized compensation costs of \$63,100 based on the fair value of Mr. Stubb's options that vested and \$6,000 for Mr. Stubb's Board Committee fees.
- (8) Mr. Bundros serves as a member of the Compensation Committee. As a member of a Board Committee, Mr. Bundros received compensation in the amount of \$500 per month for the twelve-month period of January 1, 2016 through December 31, 2016. On January 1, 2016, was granted options to purchase 253,158 shares of common exercisable at \$0.19/share, vesting on December 31, 2015 and expiring ten years from the date of grant. Total fair value of these options at grant date was approximately \$42,100 using Black-Scholes Option Pricing. During the year ended December 31, 2016, the Company recognized compensation costs of \$42,100 based on the fair value of Mr. Blum's options that vested and \$6,000 for Mr. Bundros's Board Committee fees.

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

### SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information regarding the beneficial ownership of our common stock as of December 31, 2016.

- each person, or group of affiliated persons, known by us to be the beneficial owner of more than 5% of the outstanding shares of our common stock;
- each of our directors;
- the Company's Chief Executive Officer, who also holds the positions of Chief Financial Officer and President, is the only person serving as a Named Executive as of December 31, 2016 whose total annual salary and bonus exceeded \$100,000, for services rendered in all capacities to the Company (such individuals are hereafter referred to as the "Named Executive Officers"); and all of our directors and executive officers serving as a group.

Named Executive Officers and Director Name and Address of Beneficial Owner (1)	Number of Shares of Common Stock Beneficially Owned (2)	Percentage of Shares Beneficially Owned (2)
	Bigger, Gregory – Chief Executive Officer, Chief Financial Officer, President, Director	4,583,601
Charles R. Blum – Director	2,449,613	1.23%
Dickson, Donald – Director	1,240,823	0.62%
Shelton, Nathan – Director	879,807	0.44%
Stubbs, Mark – Director	725,187	0.36%
Thomas Bundros – Director	376,712	0.19%
All directors and executive officers as a group	<u>10,255,743</u>	<u>5.15%</u>

- (1) Unless otherwise indicated, the address of each listed person is c/o QS Energy, Inc., 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111.
- (2) Percentage of beneficial ownership is based upon 199,045,026 shares of the Company's common stock outstanding as of December 31, 2016. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options and warrants currently exercisable or convertible, or exercisable or convertible within 60 days, are deemed outstanding for determining the number of shares beneficially owned and for computing the percentage ownership of the person holding such options, but are not deemed outstanding for computing the percentage ownership of any other person. Except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

## Item 13. Certain Relationships and Related Transactions, and Director Independence

### Accrued Expenses - Related Parties

As of December 31, 2016 and 2015, total accrued expenses – related parties amounted to \$135,000 and \$191,000, respectively. Included in these accruals are the unpaid salaries to a former President and current member of the Company's Board of Directors of \$15,000 and \$75,000, respectively. The Company agreed to a monthly payment of \$5,000 to the current Board member until his unpaid salary is fully settled.

### Director Independence

The Company believes Mr. Dickson, Mr. Shelton, Mr. Stubbs and Mr. Bundros are independent, and Mr. Bigger and Mr. Blum are non-independent.

#### Item 14. Principal Accounting Fees and Services

The Audit Committee has selected Weinberg & Company, P.A. to audit our financial statements for the fiscal year ended December 31, 2017.

Weinberg & Company, P.A. was first appointed in fiscal year 2003, and has audited our financial statements for fiscal years 2002 through 2016.

#### Audit and Other Fees

The following table summarizes the fees charged by Weinberg & Company, P.A. for certain services rendered to the Company during 2016 and 2015.

<u>Type of Fee</u>	<u>Amount</u>	
	<u>Fiscal Year 2016</u>	<u>Fiscal Year 2015</u>
Audit (1)	\$ 76,000	\$ 119,000
Audit Related (2)	—	—
Taxes (3)	12,000	19,000
All Other (4)	—	—
Total	<u>\$ 88,000</u>	<u>\$ 138,000</u>

- (1) This category consists of fees for the audit of our annual financial statements included in the Company's annual report on Form 10-K and review of the financial statements included in the Company's quarterly reports on Form 10-Q. This category also includes advice on audit and accounting matters that arose during, or as a result of, the audit or the review of interim financial statements, statutory audits required by non-U.S. jurisdictions and the preparation of an annual "management letter" on internal control matters.
- (2) Represents services that are normally provided by the independent auditors in connection with statutory and regulatory filings or engagements for those fiscal years, aggregate fees charged for assurance and related services that are reasonably related to the performance of the audit and are not reported as audit fees. These services include consultations regarding Sarbanes-Oxley Act requirements, various SEC filings and the implementation of new accounting requirements.
- (3) Represents aggregate fees charged for professional services for tax compliance and preparation, tax consulting and advice, and tax planning.
- (4) Represents aggregate fees charged for products and services other than those services previously reported.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of this Form 10-K.

Financial Statements:

Reference is made to the contents to the consolidated financial statements of QS Energy, Inc. under Item 7 of this Form 10-K.

(b) Exhibits:

The exhibits listed below are required by Item 601 of Regulation S-K.

Exhibit No.	Description
3.1(78)	Articles of Incorporation, as amended, of the Registrant.
3.1(87)	Articles of Merger
3.2(77)	Amended and Restated Bylaws of the Registrant.
10.1(2)	Commercial Sublease dated October 16, 2003 between the Registrant and KZ Golf, Inc.
10.2(9)	Amendment dated June 15, 2004 to Exhibit 10.1
10.3 (10)	Amendment dated August 14, 2005 to Exhibit 10.1
10.4(10)	General Tenancy Agreement dated March 14, 2006 between the Registrant and Autumlee Pty Ltd.
10.5(3)	Agreement dated December 13, 2002 between the Registrant and RAND.
10.6(2)**	Agreement dated May 7, 2003 between the Registrant and RAND.
10.7(5)	Modification No. 1 dated as of August 21, 2003 to Exhibit 10.5
10.8(5)	Modification No. 2 dated as of October 17, 2003 to Exhibit 10.5
10.9(5)	Modification No. 3 dated as of January 20, 2004 to Exhibit 10.5
10.10(4)	Deed and Document Conveyance between the Trustee of the Property of Jeffrey Ann Muller and Lynette Anne Muller (Bankrupts).
10.11(4)	Assignment and Bill of Sale dated May 28, 2002 between the Registrant and Kevin Charles Hart.
10.12(11)†	Amended and Restated Employment Agreement dated October 5, 2005 between the Registrant and Eugene E. Eichler.
10.13(15)†	Severance Agreement dated November 8, 2006 between the Registrant and Eugene E. Eichler
10.14(11)†	Amended and Restated Employment Agreement dated October 5, 2005 between the Registrant and Bruce H. McKinnon.
10.15(6)	Save the World Air, Inc. 2004 Stock Option Plan
10.16(8)	Form of Incentive Stock Option Agreement under 2004 Stock Option Plan
10.17(8)	Form of Non-Qualified Stock Option Agreement under 2004 Stock Option Plan
10.18(8)	Consulting Agreement dated as of October 1, 2004 between the Registrant and John Fawcett
10.19(7)	License Agreement dated as of July 1, 2004 between the Registrant and Temple University – The Commonwealth System of Higher Education
10.20(8)	Consulting Agreement dated as of November 19, 2004 between the Registrant and London Aussie Marketing, Ltd.
10.21(13)	Amendment dated September 14, 2006 to Exhibit 10.20
10.22(8)†	Employment Agreement dated September 1, 2004 with Erin Brockovich
10.23(15)†	Amendment dated as of July 31, 2006 to Exhibit 10.22
10.24(8)	Assignment of Patent Rights dated as of September 1, 2003 between the Registrant and Adrian Menzell

10.25(8)	Global Deed of Assignment dated June 26, 2004 between the Registrant and Adrian Menzell
10.26(11)†	Amended and Restated Employment Agreement dated as of March 1, 2006 between the Registrant and John Richard Bautista III
10.27(9)	Lease dated August 15, 2005 between the Registrant and Thomas L. Jackson
10.28(10)	Amendment dated February 1, 2006 to Exhibit 10.27
10.29(10)	Form of 9% Convertible Note issued in the 2005 Interim Financing
10.30(10)	Form of Stock Purchase Warrant issued in the 2005 Interim Financing
10.31(10)	Form of Stock Purchase Warrant issued in the 2005 Bridge Financing
10.32(11)	Form of Stock Purchase Warrant issued in 2006 Regulation S financing
10.33(11)	Form of Stock Purchase Warrant issued in 2006 PIPE financing
10.34(12)	Commercial Sublease between the Registrant and KZG Golf dated January 1, 2006
10.35(12)	Investment Agreement dated September 15, 2006 between the Registrant and Dutchess Private Equities Fund
10.36(12)	Registration Rights Agreement dated September 15, 2006 between the registrant and Dutchess Private Equities Fund, LLP
10.37(17)	License Agreement between the Registrant and Temple University dated February 2, 2007
10.38(17)	License Agreement between the Registrant and Temple University dated February 2, 2007
10.39(17)	R&D Agreement between the Registrant and Temple University dated February 2, 2007
10.40(14)	Note Purchase Agreement dated December 5, 2006 between the registrant and Morale Orchards LLC
10.41(14)	Form of Stock Purchase Warrant issued to Morale Orchards LLC
10.42(14)	Form of Convertible Note issued to Morale Orchards LLC
10.43(16)	Consulting Agreement dated January 4, 2007 between the Registrant and Spencer Clarke LLC
10.44(15)	Agreement dated as of July 15, 2006 between the Company and SS Sales and Marketing Group
10.45(15)	Engagement Agreement between the Registrant and Charles K. Dargan II
10.46(15)	Form of 10% Convertible Note issued in 2007 PIPE Offering
10.47(15)	Form of Stock Purchase Warrant issued in 2007 PIPE Offering
10.48(18)	Appointment of New Directors, Nathan Shelton, Steven Bolio and Dennis Kenneally
10.49(19)	Issuance of RAND Final Report
10.50(20)	Delisting from OTCBB to OTC Pink Sheets
10.51(21)	Resignation of Director, Dennis Kenneally
10.52(22)	Resignation of Officer, Bruce H. McKinnon
10.53(23)	Form of 10% Convertible Note issued in 2007 Spring Offering
10.54(23)	Form of Stock Purchase Warrant issued in 2007 Spring Offering
10.55(24)	Termination of North Hollywood Lease
10.56(25)	Modification Agreement of 10% 2007 PIPE Convertible Notes
10.57(26)	Form of 10% Convertible Note issued in 2007 Summer Offering
10.58(26)	Form of Stock Purchase Warrant issued in 2007 Summer Offering
10.59(27)	Resignation of Director, J. Joseph Brown
10.60(28)	Resignation of Chief Financial Officer and Appointment of Interim Chief Financial Officer
10.61(29)	Severance Agreement dated June 15, 2007 between Registrant and Bruce H. McKinnon
10.62(30)	Resignation of Director, Bruce H. McKinnon
10.63(31)	Second Modification Agreement of 10% 2007 PIPE Convertible Notes
10.64(32)	Form of 10% Convertible Note issued in 2007 Fall Offering
10.65(32)	Form of Stock Purchase Warrant issued in 2007 Fall Offering
10.66(33)	Resignation of Director, Joseph Helleis
10.67(34)	Form of 10% Convertible Note issued in 2007/8 Winter Offering
10.68(34)	Form of Stock Purchase Warrant issued in 2007/8 Winter Offering
10.69(34)	Modification and Satisfaction Agreement of Convertible Notes with Morale Orchards, LLP and Matthews & Partners

10.70(35)	Termination of employment relationship with John Bautista
10.71(36)	Form of 10% Convertible Note issued in 2008 Summer Offering
	Form of Stock Purchase Warrant issued in 2008 Summer Offering
10.72(37)	Form of 10% Convertible Note issued in 2008 Fall Offering
	Form of Stock Purchase Warrant issued in 2008 Fall Offering
10.73(38)	Form of 10% Convertible Note issued in 2008 Winter Offering
	Form of Stock Purchase Warrant issued in 2008 Winter Offering
10.74(39)	Letter Agreement with Temple University extending default date
10.75(40)	Notice of first payment to Temple University under Letter Agreement
	Announcement of date of 2010 Annual Shareholder Meeting
	Appointment of Cecil Bond Kyte as new Chief Executive Officer
10.76(41)	Form of 10% Convertible Note issued in 2009 Winter Offering
	Form of Stock Purchase Warrant issued in 2009 Winter Offering
10.77(42)	Employment Agreement with Cecil Bond Kyte
10.78(43)	Form of 10% Convertible Note issued in 2009 Winter #2 Offering
	Form of Stock Purchase Warrant issued in 2009 Winter #2 Offering
10.79(44)	Form of 10% Convertible Note issued in 2009 Spring Offering
	Form of Stock Purchase Warrant issued in 2009 Spring Offering
10.80(45)	Form of 7% Convertible Note issued in 2009 Summer Offering
	Form of Stock Purchase Warrant issued in 2009 Summer Offering
10.81(46)	Passing of Steven Bolio, Company Director
10.82(47)	Form of 7% Convertible Note issued in 2009 Wellfleet Offering
	Form of Stock Purchase Warrant issued in 2009 Wellfleet Offering
10.83(48)	Form of 7% Convertible Note issued in 2009 Fall Offering
	Form of Stock Purchase Warrant issued in 2009 Fall Offering
10.84(49)	Letter to Shareholders
10.85(50)	Form of 10% Convertible Note issued in 2010 Winter Offering
	Form of Stock Purchase Warrant issued in 2010 Winter Offering
10.86(51)	Settlement of Bruce H. McKinnon Arbitration Award
10.87(52)	Form of 10% Convertible Note Issued in 2010 Spring Offering
	Form of Stock Purchase Warrant issued in to2010 Spring Offering
10.88(53)	Form of 10% Convertible Note Issued in 2010 Summer Offering
	Form of Stock Purchase Warrant issued in 2010 Summer Offering
10.89(54)	Form of 10% Convertible Note issued in 2010 Fall Offering
	Form of Stock Purchase Warrant issued in 2010 Fall Offering
10.90(55)	Form of 10% Convertible Note issued in 2010 Fall Offering #2
	Form of Stock Purchase Warrant issued in 2010 Fall Offering #2
10.91(56)	Resignation of Director John A. Price
10.92(57)	Form of 10% Convertible Note issued in 2011 Winter Offering
	Form of Stock Purchase Warrant issued in 2011 Winter Offering
10.93(58)	Amendment to Employment Contract with Cecil Kyte
	Announcement of date of 2011 Annual Shareholder Meeting
10.94(59)	License Agreement between the Registrant and Temple University dated August 9, 2011
10.96(60)	Form of 10% Convertible Note Issued in 2011 Spring Offering
	Form of Stock Purchase Warrant issued in 2011 Spring Offering
10.97(61)	Form of 10% Convertible Note Issued in 2011 Summer Offering
	Form of Stock Purchase Warrant Issued in 2011 Summer Offering
10.94(62)	Form of 10% Convertible Note Issued in 2011 Fall Offering
	Form of Stock Purchase Warrant Issued in 2011 Fall Offering
10.95(63)	Final Report of the Rocky Mountain Oilfield Testing Center of Viscosity Reduction Device (AOT)
10.96(64)	Form of 10% Convertible Note Issued in 2011 Fall#2 Offering
	Form of Stock Purchase Warrant Issued in 2011 Fall#2 Offering

10.97(65)	Letter of Intent between Registrant and Heng He Xing Ye Technology Development Co., Ltd. dated October 19, 2011
10.98(66)	Announcement of resignation of Eugene E. Eichler, Interim Chief Financial Officer for health reasons.
10.99(67)	Form of 10% Convertible Note Issued in 2011 Fall#3 Offering
10.100(68)	Form of Stock Purchase Warrant Issued in 2011 Fall#3 Offering
10.101(69)	Form of 10% Convertible Note Issued in 2012 Winter Offering
10.102(70)	Form of Stock Purchase Warrant Issued in 2012 Winter Offering
10.103(71)	Letter of Intent between Registrant and LG Partners LLC (“LGP”)
10.104(72)	Cooperation Framework Agreement between Registrant and Heng He Xing Technology Development Co., Ltd (TDC) dated March 9, 2012
10.105(73)	Employment Agreement with Gregg Bigger, Chief Financial Officer
10.106(74)	U.S. Department of Energy Agreement dated February 6, 2012
10.107(75)	Continental Divide, LLC Agreement dated January 2, 2013
10.108(76)	Equipment Lease/Option to Purchase Agreement with TransCanada Keystone Pipeline, L.P.
10.109(79)	Amendment to Gregory M. Bigger Employment Contract.
10.110(80)	Cecil Bond Kyte Separation Agreement
10.111(81)	Equipment Lease/Option to Purchase Agreement, dated effective as of July 15, 2014, between Save The World Air, Inc. and Kinder Morgan Crude & Condensate LLC.
10.112(82)	Mutual Confidentiality Agreement, dated July 15, 2014, between Save The World Air, Inc. and Kinder Morgan Crude & Condensate LLC.
10.113(83)	Letter from TransCanada to Save The World Air, Inc., dated July 15, 2014.
10.114(84)	Newfield Exploration Company Joint Development Agreement.
10.115(85)	Haven Technology Solutions Joint Development Agreement.
10.116(86)	Registrant’s Business Plan
10.117(87)	Forms of Convertible Note, Warrant, and Securities Purchase Agreement in 2014 Fall Offering
10.118(88)	Forms of Convertible Note, Warrant, and Securities Purchase Agreement in 2015 Spring Offering
10.119(89)	Forms of Convertible Note, Warrant, and Securities Purchase Agreement in 2015 Winter Offering
10.120(90)	Amendment to Gregory M. Bigger Employment Contract dated March 10, 2016.
10.121(91)	Temple Research Agreement dated March 19, 2012, as amended March 19, 2013.
10.122*	Jason Lane Employment Agreement effective April 1, 2017
10.123*	Michael McMullen Employment Agreement effective April 1, 2017
10.124*	Bigger Separation Agreement effective April 1, 2017
21	List of Subsidiaries
24*	Power of Attorney (included on Signature Page)
31.1*	Certification of Chief Executive Officer of Annual Report Pursuant to Rule 13(a)—15(e) or Rule 15(d)—15(e).
31.2*	Certification of Chief Financial Officer of Annual Report Pursuant to 18 U.S.C. Section 1350.
32.1*	Certification of Chief Executive Officer and Chief Financial Officer of Annual Report pursuant to Rule 13(a)—15(e) or Rule 15(d)—15(e).
101.INS*	XBRL Instance Document
101.SCH*	XBRL Schema Document
101.CAL*	XBRL Calculation Linkbase Document
101.DEF*	XBRL Definition Linkbase Document
101.LAB*	XBRL Label Linkbase Document
101.PRE*	XBRL Presentation Linkbase Document
*	Filed herewith.
**	Confidential treatment previously requested.
†	Management contract or compensatory plan or arrangement.

- (1) Incorporated by reference from Registrant's Registration Statement on Form 10-SB (Registration Number 000-29185), as amended, filed on March 2, 2000.
- (2) Incorporated by reference from Registrant's Form 10KSB for the fiscal year ended December 31, 2002.
- (3) Incorporated by reference from Registrant's Form 8-K filed on December 30, 2002.
- (4) Incorporated by reference from Registrant's Form 8-K filed on November 12, 2002.
- (5) Incorporated by reference from Registrant's Form 10QSB for the quarter ended March 31, 2004.
- (6) Incorporated by reference from Appendix C of Registrant's Schedule 14A filed on April 30, 2004, in connection with its Annual Meeting of Stockholders held on May 24, 2004.
- (7) Incorporated by reference from Registrant Form 8-K filed on July 12, 2004.
- (8) Incorporated by reference from registrant's Form 10KSB for the fiscal year ended December 31, 2004.
- (9) Incorporated by reference from Registrant's Form 10QSB for the quarter ended September 30, 2005
- (10) Incorporated by reference from Registrant's Form 10KSB for the fiscal year ended December 31, 2005
- (11) Incorporated by reference from Registrant's Form SB-2 filed on June 28, 2006 (SEC File No. 333- 333-135415)
- (12) Incorporated by reference from Registrant's Form 8-K filed on September 21, 2006
- (13) Incorporated by reference from Registrant's Form SB-2 filed on October 6, 2006 (SEC File No. 333-137855)
- (14) Incorporated by reference from Registrant's Form 8-K filed on December 11, 2006
- (15) Incorporated by reference from Registrant's Form 10KSB for the fiscal year ended December 31, 2006
- (16) Incorporated by reference from Registrant's Form 8-K filed on January 10, 2007
- (17) Incorporated by reference from Registrant's Form 8-K filed on February 8, 2007
- (18) Incorporated by reference from Registrant's Form 8-K filed on February 16, 2007
- (19) Incorporated by reference from Registrant's Form 8-K filed on May 3, 2007
- (20) Incorporated by reference from Registrant's Form 8-K filed on May 22 2007
- (21) Incorporated by reference from Registrant's Form 8-K filed on June 8, 2007
- (22) Incorporated by reference from Registrant's Form 8-K filed on June 15, 2007
- (23) Incorporated by reference from Registrant's Form 8-K filed on July 2, 2007
- (24) Incorporated by reference from Registrant's Form 8-K filed on July 18, 2007
- (25) Incorporated by reference from Registrant's Form 8-K filed on August 30, 2007
- (26) Incorporated by reference from Registrant's Form 8-K filed on October 9, 2007
- (27) Incorporated by reference from Registrant's Form 8-K filed on October 23, 2007
- (28) Incorporated by reference from Registrant's Form 8-K filed on November 9, 2007
- (29) Incorporated by reference form Registrant's Form 10QSB for the nine months ended September 30, 2007
- (30) Incorporated by reference from Registrant's Form 8-K filed on November 15, 2007
- (31) Incorporated by reference from Registrant's Form 8-K filed on December 11, 2007
- (32) Incorporated by reference from Registrant's Form 8-K filed on December 20, 2007
- (33) Incorporated by reference from Registrant's Form 8-K filed on February 25, 2010
- (34) Incorporated by reference from Registrant's Form 8-K filed on March 11, 2010
- (35) Incorporated by reference from Registrant's Form 8-K filed on March 27, 2010
- (36) Incorporated by reference from Registrant's Form 8-K filed on September 3, 2010
- (37) Incorporated by reference from Registrant's Form 8-K filed on November 6, 2010
- (38) Incorporated by reference from Registrant's Form 8-K filed on December 11, 2010
- (39) Incorporated by reference from Registrant's Form 8-K filed on January 13, 2010
- (40) Incorporated by reference from Registrant's Form 8-K filed on January 27, 2010
- (41) Incorporated by reference from Registrant's Form 8-K filed on January 26, 2010
- (42) Incorporated by reference from Registrant's form 10K for the twelve months ended December 31, 2010

- (43) Incorporated by reference from Registrant's Form 8-K filed on March 12, 2010
- (45) Incorporated by reference from Registrant's Form 8-K filed on September 30, 2010
- (46) Incorporated by reference from Registrant's Form 8-K filed on November 24, 2010
- (47) Incorporated by reference from Registrant's Form 8-K filed on December 7, 2010
- (48) Incorporated by reference from Registrant's Form 8-K filed on February 3, 2010
- (49) Incorporated by reference from Registrant's Form 8-K filed on March 22, 2010
- (50) Incorporated by reference from Registrant's Form 8-K filed on April 8, 2010
- (51) Incorporated by reference from Registrant's Form 8-K filed on April 13, 2010
- (52) Incorporated by reference from Registrant's Form 8-K filed on May 7, 2010
- (53) Incorporated by reference from Registrant's Form 8-K filed on August 11, 2010
- (54) Incorporated by reference from Registrant's Form 8-K filed on November 11, 2010
- (55) Incorporated by reference from Registrant's Form 8-K filed on December 6, 2010
- (56) Incorporated by reference from Registrant's Form 8-K filed on February 25, 2011
- (57) Incorporated by reference from Registrant's Form 8-K filed on March 7, 2011
- (58) Incorporated by reference from Registrant's Form 8-K filed on March 9, 2011
- (59) Incorporated by reference from Registrant's Form 8-K filed on August 11, 2011
- (60) Incorporated by reference from Registrant's Form 8-K filed on June 9, 2011
- (61) Incorporated by reference from Registrant's Form 8-K filed on August 10, 2011
- (62) Incorporated by reference from Registrant's Form 8-K filed on October 21, 2011
- (63) Incorporated by reference from Registrant's Form 8-K filed on October 25, 2011
- (64) Incorporated by reference from Registrant's Form 8-K filed on December 14, 2011
- (65) Incorporated by reference from Registrant's Form 8-K filed on December 27, 2011
- (66) Incorporated by reference from Registrant's Form 8-K filed on January 4, 2012
- (67) Incorporated by reference from Registrant's Form 8-K filed on January 23, 2012
- (68) Incorporated by reference from Registrant's Form 8-K filed on January 23, 2012
- (69) Incorporated by reference from Registrant's Form 8-K filed on January 23, 2012
- (70) Incorporated by reference from Registrant's Form 8-K filed on February 8, 2012
- (71) Incorporated by reference from Registrant's Form 8-K filed on March 16, 2012
- (72) Incorporated by reference from Registrant's Form 8-K filed on March 20, 2012
- (73) Incorporated by reference from Registrant's Form 10-K filed on March 30, 2012
- (74) Incorporated by reference from Registrant's Form 10-K filed on March 30, 2012
- (75) Incorporated by reference from Registrant's Form 10-K filed on March 22, 2013
- (76) Incorporated by reference from Registrant's Form 8-K filed on August 1, 2013
- (77) Incorporated by reference from Registrant's Form 8-K filed on July 8, 2013
- (78) Incorporated by reference from Registrant's Form 8-K filed on December 20, 2013
- (79) Incorporated by reference from Registrant's Form 10-K filed on March 17, 2014
- (80) Incorporated by reference from Registrant's Form 10-K filed on March 17, 2014
- (81) Incorporated by reference from Registrant's Form 8-K filed on July 21, 2014
- (82) Incorporated by reference from Registrant's Form 8-K filed on July 21, 2014
- (83) Incorporated by reference from Registrant's Form 8-K filed on July 21, 2014
- (84) Incorporated by reference from Registrant's Form 10-Q filed on November 10, 2014
- (85) Incorporated by reference from Registrant's Form 10-Q filed on November 10, 2014
- (86) Incorporated by reference from Registrant's Form 8-K filed on December 1, 2015
- (87) Incorporated by reference from Registrant's Form 10-K filed on March 15, 2016
- (88) Incorporated by reference from Registrant's Form 10-K filed on March 15, 2016
- (89) Incorporated by reference from Registrant's Form 10-K filed on March 15, 2016
- (90) Incorporated by reference from Registrant's Form 10-K filed on March 15, 2016
- (91) Incorporated by reference from Registrant's Form 10-K filed on March 15, 2016

## SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the Registrant has caused this report to be signed on its behalf by the undersigned, hereunto duly authorize.

### QS Energy, Inc.

Date: March 31, 2017

By: /s/ Gregory Bigger  
Gregory Bigger  
*Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gregory Bigger as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934 this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>NAME</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Gregory Bigger</u> Gregory Bigger	Chief Executive Officer and Chairman of the Board of Directors	March 31, 2017
<u>/s/ Charles R. Blum</u> Charles R. Blum	Director	March 31, 2017
<u>/s/ Donald Dickson</u> Donald Dickson	Director	March 31, 2017
<u>/s/ Nathan Shelton</u> Nathan Shelton	Director	March 31, 2017
<u>/s/ Mark Stubbs</u> Mark Stubbs	Director	March 31, 2017
<u>/s/ Thomas Bundros</u> Thomas Bundros	Director	March 31, 2017

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

QS ENERGY, INC. AND SUBSIDIARIES  
DECEMBER 31, 2016 AND 2015

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of  
QS Energy, Inc. and Subsidiaries

We have audited the accompanying consolidated balance sheets of QS Energy, Inc. and Subsidiaries (the "Company") as of December 31, 2016 and 2015 and the related consolidated statements of operations, stockholders' deficit and cash flows for the years ended December 31, 2016 and 2015. The Company's management is responsible for these financial statements. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate under the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of QS Energy, Inc. and Subsidiaries as of December 31, 2016 and 2015 and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2, the Company has experienced recurring operating losses and negative operating cash flows since inception, has a stockholders' deficit, and has financed its working capital requirements through the recurring sale of its debt and equity securities. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2 to the financial statements. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Weinberg & Company, P.A.

Weinberg & Company, P.A.  
Los Angeles, California  
March 31, 2017

**QS ENERGY, INC.**  
**CONSOLIDATED BALANCE SHEETS**

	<b>December 31 2016</b>	<b>December 31 2015</b>
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash	\$ 136,000	\$ 349,000
Prepaid expenses and other current assets	26,000	51,000
<b>Total current assets</b>	<b>162,000</b>	<b>400,000</b>
Property and equipment, net of accumulated depreciation of \$32,000 and \$60,000 at December 31, 2016 and 2015, respectively	17,000	22,000
Other assets	7,000	6,000
<b>Total assets</b>	<b>\$ 186,000</b>	<b>\$ 428,000</b>
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>		
<b>Current liabilities:</b>		
Accounts payable-license agreements	\$ 805,000	\$ 590,000
Accounts payable and accrued expenses	251,000	182,000
Accrued expenses -related parties	135,000	191,000
Deposit and other current liabilities	5,000	25,000
Convertible debentures, net of discounts of \$92,000 and \$101,000 at December 31, 2016 and 2015, respectively	348,000	222,000
<b>Total current liabilities</b>	<b>1,544,000</b>	<b>1,210,000</b>
<b>Commitments and contingencies</b>		
<b>Stockholders' deficit</b>		
Common stock, \$0.001 par value: 300,000,000 shares authorized 199,045,026 and 183,831,577 shares issued and outstanding at December 31, 2016 and 2015, respectively	199,045	183,832
Additional paid-in capital	103,716,955	100,308,168
Accumulated deficit	(105,274,000)	(101,274,000)
<b>Total stockholders' deficit</b>	<b>(1,358,000)</b>	<b>(782,000)</b>
<b>Total liabilities and stockholders' deficit</b>	<b>\$ 186,000</b>	<b>\$ 428,000</b>

The accompanying notes are an integral part of these consolidated financial statements.

**QS ENERGY, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Twelve months ended December 31	
	2016	2015
Revenues	\$ —	\$ —
Operating expenses	2,103,000	2,915,000
Research and development expenses	279,000	578,000
Loss before other income (expense)	(2,382,000)	(3,493,000)
Other income	2,000	11,000
Interest and financing expense	(1,617,000)	(747,000)
Loss on disposition of equipment	(3,000)	—
Net Loss	\$ (4,000,000)	\$ (4,229,000)
Net loss per common share, basic and diluted	\$ (0.02)	\$ (0.02)
Weighted average common shares outstanding, basic and diluted	192,831,810	182,267,719

The accompanying notes are an integral part of these consolidated financial statements.

**QS ENERGY, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT**  
**FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015**

	<u>Common Stock</u>		<u>Additional</u>	<u>Accumulated</u>	<u>Total</u>
	<u>Shares</u>	<u>Amount</u>	<u>Paid-in</u>	<u>Deficit</u>	<u>Stockholders'</u>
			<u>Capital</u>		<u>Deficit</u>
<b>Balance, January 1, 2015</b>	181,028,244	\$ 181,028	\$ 98,231,972	\$ (97,045,000)	\$ 1,368,000
Common stock issued upon exercise of warrants	200,000	200	49,800	-	50,000
Common stock issued upon conversion of notes payable	2,603,333	2,604	666,396	-	669,000
Fair value of warrants and beneficial conversion feature of issued convertible notes	-	-	631,000	-	631,000
Fair value of options and warrants issued as compensation	-	-	729,000	-	729,000
Net loss	-	-	-	(4,229,000)	(4,229,000)
<b>Balance, December 31, 2015</b>	<u>183,831,577</u>	<u>183,832</u>	<u>100,308,168</u>	<u>(101,274,000)</u>	<u>(782,000)</u>
Common stock issued upon conversion of notes payable	14,913,449	14,913	1,476,087	-	1,491,000
Common stock issued for services	300,000	300	47,700	-	48,000
Fair value of warrants and beneficial conversion feature of issued convertible notes	-	-	1,443,000	-	1,443,000
Fair value of options and warrants issued as compensation	-	-	442,000	-	442,000
Net loss	-	-	-	(4,000,000)	(4,000,000)
<b>Balance, December 31, 2016</b>	<u>199,045,026</u>	<u>\$ 199,045</u>	<u>\$ 103,716,955</u>	<u>\$(105,274,000)</u>	<u>\$ (1,358,000)</u>

The accompanying notes are an integral part of these consolidated financial statements.

**QS ENERGY, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Twelve months ended December 31	
	2016	2015
<b>Cash flows from Operating Activities</b>		
Net loss	\$ (4,000,000)	\$ (4,229,000)
Adjustments to reconcile net loss to net cash used in operating activities:		
Fair value of options and warrants issued as compensation	442,000	729,000
Common stock issued for services	48,000	–
Amortization of debt discounts	1,596,000	702,000
Interest expense added to notes payable	21,000	21,000
Loss on disposition of equipment	3,000	–
Depreciation and amortization	7,000	12,000
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	24,000	21,000
Accounts payable – license agreements	215,000	185,000
Accounts payable and accrued expenses	69,000	32,000
Accrued expenses – related parties	(56,000)	(69,000)
Deposit and other current liabilities	5,000	–
Net cash used in operating activities	<u>(1,626,000)</u>	<u>(2,596,000)</u>
<b>Cash flows from investing activities</b>		
Purchase of equipment	(5,000)	(13,000)
Net cash used in investing activities	<u>(5,000)</u>	<u>(13,000)</u>
<b>Cash flows from financing activities</b>		
Net proceeds from issuance of convertible notes and warrants	1,418,000	660,000
Net proceeds from exercise of warrants and options	–	50,000
Net cash provided by financing activities	<u>1,418,000</u>	<u>710,000</u>
<b>Net decrease in cash</b>	<u>(213,000)</u>	<u>(1,899,000)</u>
<b>Cash, beginning of period</b>	<u>349,000</u>	<u>2,248,000</u>
<b>Cash, end of period</b>	<u>\$ 136,000</u>	<u>\$ 349,000</u>
<b>Supplemental disclosures of cash flow information</b>		
Cash paid during the year for:		
Interest	\$ –	\$ –
Income Taxes	\$ –	\$ –
<b>Non-cash investing and financing activities</b>		
Conversion of convertible debentures to common stock	\$ 1,491,000	\$ 669,000
Deposit converted to note payable	\$ 25,000	–
Fair value of warrants and beneficial conversion feature associated with issued convertible notes	\$ 1,443,000	\$ 631,000

The accompanying notes are an integral part of these consolidated financial statements.

**QS ENERGY, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015**

**1. Description of Business**

**Description of Business**

QS Energy, Inc. (“QS Energy”, “Company”) was incorporated on February 18, 1998, as a Nevada Corporation under the name Mandalay Capital Corporation. The Company changed its name to Save the World Air, Inc. on February 11, 1999. Effective August 11, 2015, the Company changed its name to QS Energy, Inc. The Company’s common stock is quoted under the symbol “QSEP” on the Over-the-Counter Bulletin Board. More information including the Company’s fact sheet, logos and media articles are available at our corporate website, [www.qsenergy.com](http://www.qsenergy.com).

QS Energy develops and commercializes energy efficiency technologies that assist in meeting increasing global energy demands, improving the economics of oil extraction and transport, and reducing greenhouse gas emissions. The Company's intellectual properties include a portfolio of domestic and international patents and patents pending, a substantial portion of which have been developed in conjunction with and exclusively licensed from Temple University of Philadelphia, PA (“Temple”). QS Energy's primary technology is called Applied Oil Technology™ (AOT), a commercial-grade crude oil pipeline transportation flow-assurance product. Engineered specifically to reduce pipeline pressure loss, increase pipeline flow rate and capacity, and reduce shippers’ reliance on diluents and drag reducing agents to meet pipeline maximum viscosity requirements, AOT is a 100% solid-state system that reduces crude oil viscosity by applying a high intensity electrical field to crude oil feedstock while in transit. The AOT product has transitioned from the research and development stage to initial production for continued testing in advance of our goal of seeking acceptance and adoption by the midstream pipeline marketplace.

The Company also began commercial development of a suite of products based around the Joule Heat technology. The Company began fabrication of prototype equipment to be operated under a joint development agreement with a commercial entity in the fourth quarter of 2014. The Company’s first Joule Heat prototype was installed for testing purposes at the Newfield facility in June 2015 and the system is operational; however, changes to the prototype configuration will be required to determine commercial effectiveness of this unit. In addition, the Company filed two additional provisional patents related to the technology’s method and apparatus. In December 2015, we temporarily suspended Joule Heat development activities to focus Company resources on finalizing commercial development of the AOT Midstream. We currently plan to resume Joule Heat development in 2017 depending on the availability of sufficient capital and other resources.

**2. Summary of Significant Accounting Policies**

**Consolidation Policy**

The accompanying consolidated financial statements of QS Energy Inc. include the accounts of QS Energy Inc. (the Parent) and its wholly owned subsidiaries, QS Energy Pool, Inc. and STWA Asia Pte. Limited. Intercompany transactions and balances have been eliminated in consolidation.

**Going Concern**

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. As reflected in the accompanying consolidated financial statements, during the twelve-months ended December 31, 2016, the Company incurred a net loss of \$4,000,000, used cash in operations of \$1,626,000 and had a stockholders’ deficit of \$1,358,000 as of that date. These factors raise substantial doubt about the Company’s ability to continue as a going concern within one year after the date that the financial statements are issued. The ability of the Company to continue as a going concern is dependent upon the Company’s ability to raise additional funds and implement its business plan. The financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern.

At December 31, 2016, the Company had cash on hand in the amount of \$136,000. Management estimates that the current funds on hand will be sufficient to continue operations through April 2017. Management is currently seeking additional funds, primarily through the issuance of debt and equity securities for cash to operate our business, including without limitation the expenses it will incur in connection with the license and research and development agreements with Temple University; costs associated with product development and commercialization of the AOT technology; costs to manufacture and ship the products; costs to design and implement an effective system of internal controls and disclosure controls and procedures; costs of maintaining our status as a public company by filing periodic reports with the SEC and costs required to protect our intellectual property. In addition, as discussed below, the Company has substantial contractual commitments, including without limitation, payment of license and other fees to Temple University, salaries to our executive officers pursuant to employment agreements, certain payments to a former officer and consulting fees, during the remainder of 2017 and beyond.

No assurance can be given that any future financing will be available or, if available, that it will be on terms that are satisfactory to the Company. Even if the Company is able to obtain additional financing, it may contain undue restrictions on our operations, in the case of debt financing or cause substantial dilution for our stockholders in case of equity financing.

### **Revenue Recognition Policy**

The Company recognizes lease revenue upon commencement of the lease. Revenue on future product sales will be recognized upon meeting the following criteria: persuasive evidence of an arrangement exists; delivery has occurred or services rendered; the seller's price to the buyer is fixed or determinable; and collectability is reasonably assured.

### **Property and Equipment and Depreciation**

Property and equipment are stated at cost. Depreciation is computed using the straight-line method based on the estimated useful lives of the assets, generally ranging from three to ten years. Expenditures for major renewals and improvements that extend the useful lives of property and equipment are capitalized. Expenditures for repairs and maintenance are charged to expense as incurred. Leasehold improvements are amortized using the straight-line method over the shorter of the estimated useful life of the asset or the lease term.

### **Impairment of Long-lived Assets**

Our long-lived assets, such as property and equipment, are reviewed for impairment at least annually, or when events and circumstances indicate that depreciable or amortizable long lived assets might be impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. When specific assets are determined to be unrecoverable, the cost basis of the asset is reduced to reflect the current value.

We use various assumptions in determining the current fair value of these assets, including future expected cash flows and discount rates, as well as other fair value measures. Our impairment loss calculations require us to apply judgment in estimating future cash flows, including forecasting useful lives of the assets and selecting the discount rate that reflects the risk inherent in future cash flows.

If actual results are not consistent with our assumptions and judgments used in estimating future cash flows and asset fair values, we may be exposed to future impairment losses that could be material to our results. Based upon management's annual review, no impairments were recorded for the years ended December 31, 2016, and 2015.

### **Loss per Share**

Basic loss per share is computed by dividing net loss available to common stockholders by the weighted average number of common shares outstanding during the period. Diluted loss per share reflects the potential dilution, using the treasury stock method that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the loss of the Company. In computing diluted loss per share, the treasury stock method assumes that outstanding options and warrants are exercised and the proceeds are used to purchase common stock at the average market price during the period. Options and warrants may have a dilutive effect under the treasury stock method only when the average market price of the common stock during the period exceeds the exercise price of the options and warrants.

For the years ended December 31, 2016 and 2015, the dilutive impact of outstanding stock options of 23,474,256 shares and 21,535,148 shares; outstanding warrants of 11,446,892 shares and 4,411,667 shares; and notes convertible into 2,540,211 and 509,667 shares of our common stock, respectively, have been excluded because their impact on the loss per share is anti-dilutive.

### **Income Taxes**

Income taxes are recognized for the amount of taxes payable or refundable for the current year and deferred tax liabilities and assets are recognized for the future tax consequences of transactions that have been recognized in the Company's consolidated financial statements or tax returns. A valuation allowance is provided when it is more likely than not that some portion or entire deferred tax asset will not be realized.

### **Stock-Based Compensation**

The Company periodically issues stock options and warrants to employees and non-employees in non-capital raising transactions for services and for financing costs. The Company accounts for stock option and warrant grants issued and vesting to employees based on the authoritative guidance provided by the Financial Accounting Standards Board whereas the value of the award is measured on the date of grant and recognized over the vesting period. The Company accounts for stock option and warrant grants issued and vesting to non-employees in accordance with the authoritative guidance of the Financial Accounting Standards Board whereas the value of the stock compensation is based upon the measurement date as determined at either a) the date at which a performance commitment is reached, or b) at the date at which the necessary performance to earn the equity instruments is complete. Non-employee stock-based compensation charges generally are amortized over the vesting period on a straight-line basis. In certain circumstances where there are no future performance requirements by the non-employee, option grants are immediately vested and the total stock-based compensation charge is recorded in the period of the measurement date.

The fair value of the Company's stock options and warrants grant is estimated using the Black-Scholes Option Pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the stock options or warrants, and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes Option Pricing model, and based on actual experience. The assumptions used in the Black-Scholes Option Pricing model could materially affect compensation expense recorded in future periods.

### **Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include those related to assumptions used in impairment analysis for fixed assets, valuing accruals and equity instruments. Actual results could differ from those estimates.

### **Fair Value of Financial Instruments**

Effective January 1, 2008, fair value measurements are determined by the Company's adoption of authoritative guidance issued by the FASB, with the exception of the application of the statement to non-recurring, non-financial assets and liabilities as permitted. The adoption of the authoritative guidance did not have a material impact on the Company's fair value measurements. Fair value is defined in the authoritative guidance as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A fair value hierarchy was established, which prioritizes the inputs used in measuring fair value into three broad levels as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Inputs, other than the quoted prices in active markets, are observable either directly or indirectly.

Level 3—Unobservable inputs based on the Company's assumptions.

The Company is required to use of observable market data if such data is available without undue cost and effort.

The carrying amounts for cash, accounts payable, accrued expenses and convertible debentures approximate their fair value due to their short-term nature.

### **Research and Development Costs**

Costs incurred for research and development are expensed as incurred. Purchased materials that do not have an alternative future use are also expensed. Furthermore, costs incurred in the construction of prototypes with no certainty of any alternative future use and established commercial uses are also expensed.

For the years ended December 31, 2016 and 2015 research and development costs were \$279,000 and \$578,000, respectively.

### **Patent Costs**

Patent costs consist of patent-related legal and filing fees. Due to the uncertainty associated with the successful development of our AOT and Joule Heat products, all patent costs are expensed as incurred. During the years ended December 31, 2016 and 2015, patent costs were \$64,000 and \$53,000, respectively, and were included as part of operating expenses in the accompanying consolidated statements of operations.

### **Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers. ASU 2014-09 is a comprehensive revenue recognition standard that will supersede nearly all existing revenue recognition guidance under current U.S. GAAP and replace it with a principle based approach for determining revenue recognition. ASU 2014-09 will require that companies recognize revenue based on the value of transferred goods or services as they occur in the contract. The ASU also will require additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for interim and annual periods beginning after December 15, 2017. Early adoption is permitted only in annual reporting periods beginning after December 15, 2016, including interim periods therein. Entities will be able to transition to the standard either retrospectively or as a cumulative-effect adjustment as of the date of adoption. The Company is in the process of evaluating the impact of ASU 2014-09 on the Company's financial statements and disclosures. In February 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-02, Leases. ASU 2016-02 requires a lessee to record a right of use asset and a corresponding lease liability on the balance sheet for all leases with terms longer than 12 months. ASU 2016-02 is effective for all interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company is in the process of evaluating the impact of ASU 2016-02 on the Company's financial statements and disclosures.

In February 2016, the FASB issued Accounting Standards Update (ASU) No. 2016-02, *Leases*. ASU 2016-02 requires a lessee to record a right of use asset and a corresponding lease liability on the balance sheet for all leases with terms longer than 12 months. ASU 2016-02 is effective for all interim and annual reporting periods beginning after December 15, 2018. Early adoption is permitted. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company is in the process of evaluating the impact of ASU 2016-02 on the Company's financial statements and disclosures.

In March 2016, the FASB issued the ASU 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The amendments in this ASU require, among other things, that all income tax effects of awards be recognized in the income statement when the awards vest or are settled. The ASU also allows for an employer to repurchase more of an employee's shares than it can today for tax withholding purposes without triggering liability accounting and allows for a policy election to account for forfeitures as they occur. The amendments in this ASU are effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. Early adoption is permitted for any entity in any interim or annual period. The Company is currently evaluating the expected impact that the standard could have on its financial statements and related disclosures.

Other recent accounting pronouncements issued by the FASB, including its Emerging Issues Task Force, the American Institute of Certified Public Accountants, and the Securities and Exchange Commission did not or are not believed by management to have a material impact on the Company's present or future consolidated financial statement presentation or disclosures.

### 3. Accrued Expenses – Related Parties

Accrued Expenses – Related Parties consists of unpaid salaries and corresponding payroll taxes of officer's salaries, unused vacation of officers and unpaid board and committee fees to members of the Company's Board of Directors. As of December 31, 2016 and 2015, total accrued expenses – related parties amounted to \$135,000 and \$191,000, respectively. Included in these accruals are the unpaid salaries to a former President and current member of the Company's Board of Directors of \$15,000 and \$75,000, respectively. The Company agreed to a monthly payment of \$5,000 to the current Board member until his unpaid salary is fully settled.

### 4. Property and Equipment

At December 31, 2016 and 2015, property and equipment consists of the following:

	December 31,	
	2016	2015
Office equipment	\$ 28,000	\$ 65,000
Furniture and fixtures	3,000	4,000
Testing equipment	18,000	13,000
Subtotal	49,000	82,000
Less accumulated depreciation	(32,000)	(60,000)
Total	\$ 17,000	\$ 22,000

During the year ended December 31, 2016, the Company disposed of certain property and equipment with aggregate costs of \$38,000 and accumulated depreciation of \$35,000 which resulted in a loss of \$3,000. Depreciation expense for the years ended December 31, 2016 and 2015 was \$7,000 and \$12,000, respectively.

### 5. Convertible Notes and Warrants

	December 31,	
	2016	2015
Convertible note	\$ 417,000	\$ 321,000
Interest	23,000	2,000
Subtotal	440,000	323,000
Convertible note discount	(92,000)	(101,000)
Total	\$ 348,000	\$ 222,000

At January 1, 2015, total outstanding notes payable on convertible notes issued in 2014 amounted to \$245,000 and unamortized note discount was \$106,000.

During the year ended December 31, 2015, the Company issued convertible promissory notes in the aggregate of \$726,000 for cash proceeds of \$660,000 or a discount of \$66,000. The notes do not bear any interest; however, the implied interest rate used was 10% since the notes were issued at 10% less than their face value, are unsecured, mature in twelve months from issuance and convertible at \$0.30 and \$0.10 per share. In addition, the Company also granted these note holders warrants to purchase 1,796,667 shares of the Company's common stock. The warrants are fully vested, exercisable at \$0.30 and \$0.10 per share and expired one year from the date of issuance. As a result, the Company recorded total note discount of \$697,000 to account for the relative fair value of the warrants, the notes' BCF and OID. The note discounts were amortized over the life of the notes or were amortized in full upon the conversion of the corresponding notes to common stock. During 2015, a total of \$669,000 of notes payable were converted into 2.6 million shares of common stock and amortized note discount of \$702,000 was recorded as interest expense. As of December 31, 2015, total outstanding notes payable amounted to \$321,000 and unamortized note discount of \$101,000. Three notes in the aggregate of \$211,000 matured without conversion as of December 31, 2015. As a result, the Company increased the principal amount of each note by 10% under terms of the notes in the aggregate amount of \$19,000 and accrued interest of \$2,000. As of December 31, 2015, interest accrued for these notes amounted to \$2,000 which was reported as part of convertible debentures in the accompanying consolidated balance sheet.

During the year ended December 31, 2016, the Company issued similar convertible promissory notes in the aggregate of \$1,587,000 for cash proceeds of \$1,418,000 and conversion of a deposit received from an investor in 2015 amounting to \$25,000 and a discount of \$144,000. The notes do not bear any interest; however, the implied interest rate used was 10% since the notes were issued 10% less than its face value, are unsecured, mature in twelve months from issuance and convertible at \$0.10 per share. In addition, the Company also granted these note holders warrants to purchase 7.9 million shares of the Company's common stock. The warrants are fully vested, exercisable at \$0.10 per share and expire one year from the date of issuance. As a result, the Company recorded a note discount of \$1,587,000 to account for the relative fair value of the warrants, the notes' BCF and OID. The note discounts are amortized over the life of the notes or were amortized in full upon the conversion of the corresponding notes to common stock. During 2016, a total of \$1,491,000 of notes payable were converted into 14.9 million shares of common stock and amortized note discount of \$1,596,000 was recorded as interest expense. As of December 31, 2016, total outstanding notes payable amounted to \$417,000 and unamortized note discount of \$92,000. During the year ended December 31, 2016, the Company accrued interest of \$21,000. As of December 31, 2016, total accrued interest amounted to \$23,000 which was reported as part of convertible debentures in the accompanying consolidated balance sheet. The Company is currently in negotiations with the noteholders to settle the matured notes payable.

## **6. Research and Development**

The Company constructs, develops and tests the AOT and Joule Heat technologies with internal resources and through the assistance of various third party entities. Costs incurred and expensed include fees such as license fees, U.S. Department of Energy testing fees, purchase of test equipment, pipeline pumping equipment, crude oil tank batteries, viscometers, SCADA systems, computer equipment, payroll and other related equipment and various logistical expenses for the purposes of evaluating and testing the Company's AOT prototypes.

For the years ended December 31, 2016 and 2015, our research and development expenses were \$279,000 and \$578,000, respectively.

### **AOT and Joule Heat Product Development and Testing**

The Company constructs, develops and tests the AOT and Joule Heat technologies with internal resources and through the assistance of various third party entities. Costs incurred and expensed include fees such as testing fees, purchase of test equipment, pipeline pumping equipment, crude oil tank batteries, viscometers, SCADA systems, computer equipment, payroll and other related equipment and various logistical expenses for the purposes of evaluating and testing the Company's AOT and Joule Heat prototypes.

Total expenses incurred during the year ended December 31, 2015, AOT and Joule Heat product development and testing amounted to \$216,000 and has been reflected as part of Research and Development expenses on the accompanying consolidated statements of operations. There were no such costs in 2016.

### **AOT Prototypes**

During the years ended December 31, 2016 and 2015, the Company incurred total expenses of \$64,500 and \$109,500, respectively, in the manufacture and delivery of the AOT prototype equipment under lease agreements. These expenses have been reflected as part of Research and Development expenses on the accompanying consolidated statements of operations.

### **Temple University Licensing Agreement**

On August 1, 2011, the Company and Temple University ("Temple") entered into two (2) Exclusive License Agreements (collectively, the "License Agreements") relating to Temple's patent applications, patents and technical information pertaining to technology associated with an electric and/or magnetic field assisted fuel injector system (the "First Temple License"), and to technology to reduce crude oil viscosity (the "Second Temple License"). The License Agreements are exclusive and the territory licensed to the Company is worldwide and replace previously issued License Agreements.

Pursuant to the two licensing agreements, the Company agreed to pay Temple the following: (i) non-refundable license maintenance fee of \$300,000; (ii) annual maintenance fees of \$187,500; (iii) royalty fee ranging from 4% up to 7% from revenues generated from the licensing agreements; and (iv) 25% of all revenues generated from sub-licensees to secure or maintain the sub-license or option thereon. Temple also agreed to defer \$37,500 of the amount due if the Company agrees to fund at least \$250,000 in research or development of Temple's patent rights licensed to the Company. The term of the licenses commenced in August 2011 and will expire upon the expiration of the patents. The agreement can also be terminated by either party upon notification under terms of the licensing agreements or if the Company ceases the development of the patent or failure to commercialize the patent rights.

Total expenses recognized during each year ended December 31, 2016 and 2015 pursuant to these two agreements amounted to \$187,500 each year and have been reflected in Research and Development expenses on the accompanying consolidated statements of operations. In addition, the Company also recognized penalty interest of \$78,000 due to past due balance in the year ended December 31, 2016.

As of December 31, 2016 and 2015, total unpaid fees due to Temple pursuant to these agreements amounted to \$726,000 and \$461,000, respectively, which are included as part of Accounts Payable – licensing agreement in the accompanying consolidated balance sheets. As of December 31, 2016, payment of \$203,000 of the \$726,000 payable has been deferred under terms of the license agreements and the remaining \$523,000 is deemed past due. The Company is currently in negotiations with Temple to settle this amount due.

#### **Temple University Sponsored Research Agreement**

On March 19, 2012, the Company entered into a Sponsored Research Agreement (“Research Agreement”) with Temple University (“Temple”), whereby Temple, under the direction of Dr. Rongjia Tao, will perform ongoing research related to the Company's AOT device (the “Project”), for the period April 1, 2012, through April 1, 2014. All rights and title to intellectual property resulting from Temple's work related to the Project shall be subject to the Exclusive License Agreements between Temple and the Company, dated August 1, 2011. In exchange for Temple's research efforts on the Project, the Company has agreed to pay Temple \$500,000, payable in quarterly installments of \$62,500.

In August 2013, the Company and Temple amended the Research Agreement. Under the amended agreement, parties agreed that total cost for Phase 1 of the agreement was \$241,408 and total cost for Phase 2 of the agreement was \$258,592 payable beginning September 1, 2013 in eight quarterly installments of \$32,324.

During the year ended December 31, 2015, the Company recognized a total expense of \$65,000 pursuant to this agreement and such costs have been reflected in Research and Development expenses on the accompanying consolidated statements of operations. This agreement expired effective August 31, 2015, as such, no expense was incurred under this agreement in the year ended December 31, 2016. During the year ended December 31, 2016, Temple University provided a final invoice in the amount of \$79,000 reconciling amounts invoiced against services provided under the Research Agreement. The Company recognized a credit against the amount due under the Research Agreement in the amount of \$50,000, reducing the current payable from \$129,000 to \$79,000.

As of December 31, 2016 and 2015, total unpaid fees due to Temple pursuant to this agreement amounted to \$79,000 and \$129,000, respectively, which are included as part of Accounts Payable – licensing agreement in the accompanying consolidated balance sheets. As of December 31, 2016, the entire \$79,000 is deemed past due. The Company is currently in negotiations with Temple to settle this amount due.

## 7. Common Stock Transactions

### Year Ending December 31, 2016

During the year ended December 31, 2016, the Company issued an aggregate of 15,213,449 shares of its common stock as follows:

- The Company issued 14,913,449 shares of its common stock upon the conversion of \$1,491,000 in convertible notes pursuant to the convertible notes conversion price of \$0.10 per share.
- The Company also issued 300,000 shares of common stock to consultants for services rendered with a fair value of \$48,000 which is included as part of Operating Expenses in the accompanying consolidated statements of operations. The shares were valued at the trading price at the date of issuance.

### Year Ending December 31, 2015

During the year ended December 31, 2015, the Company issued an aggregate of 2,803,333 shares of its common stock as follows:

- The Company issued 2,603,333 shares of its common stock upon the conversion of \$669,000 in convertible notes pursuant to the convertible notes conversion price ranging from \$0.10 to \$0.48 per share.
- The Company issued 200,000 shares of its common stock upon exercise of warrants at price of \$0.25 per share for total cash proceeds of at \$50,000.

## 8. Stock Options and Warrants

The Company periodically issues stock options and warrants to employees and non-employees in capital raising transactions, for services and for financing costs. Options and warrants vest and expire according to terms established at the grant date.

### Options

Employee options vest according to the terms of the specific grant and expire from 5 to 10 years from date of grant. The weighted-average, remaining contractual life of employee and Non-employee options outstanding at December 31, 2016 was 5.2 years. Stock option activity for the period January 1, 2015 to December 31, 2016, was as follows:

	<u>Weighted Avg. Options</u>	<u>Weighted Avg. Exercise Price</u>
Options, January 1, 2015	21,052,030	\$ 0.20
Options granted	838,552	0.46
Options exercised	–	–
Options forfeited	(355,434)	0.72
Options, December 31, 2015	<u>21,535,148</u>	<u>\$ 0.30</u>
Options granted	2,250,527	0.19
Options exercised	–	–
Options forfeited	(311,419)	0.75
Options, December 31, 2016	<u><u>23,474,256</u></u>	<u><u>\$ 0.28</u></u>

The weighted average exercise prices, remaining contractual lives for options granted, exercisable, and expected to vest as of December 31, 2016 were as follows:

Option Exercise Price Per Share	Outstanding Options			Exercisable Options	
	Shares	Life (Years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
\$ 0.18 - \$ 0.99	23,323,810	4.8	\$ 0.27	22,783,810	\$ 0.28
\$ 1.00 - \$ 1.99	150,446	6.6	\$ 1.18	150,446	\$ 1.18
	<u>23,474,256</u>		<u>\$ 0.28</u>	<u>20,671,512</u>	<u>\$ 0.28</u>

As of December 31, 2016 the market price of the Company's stock was \$0.05 per share. At December 31, 2016 the aggregate intrinsic value of the options outstanding was \$0. Future unamortized compensation expense on the unvested outstanding options at December 31, 2016 is approximately \$41,000.

#### **Year Ending December 31, 2016**

- From January through May 2016, the Company issued options to purchase a total of 2,250,527 shares of common stock to employees, officers and members of the Board of Directors with a fair value of \$357,000 using the Black-Scholes Option Pricing model. The options are exercisable from \$0.18 up to \$0.19 per share, vesting within one or two years and expiring in ten years from the date of grant. During the year ended December 31, 2016, the Company recognized compensation costs of \$316,000 based on options that vested.
- During the year ended December 31, 2016, the Company amortized \$34,000 of compensation cost based on the vesting of the options granted to employees and directors in prior years.

#### **Year Ending December 31, 2015**

- From January through July 2015, the Company issued options to purchase a total of 838,552 shares of common stock to employees, officers and members of the Board of Directors with a fair value of \$324,000 using the Black-Scholes Option Pricing model. The options are exercisable from \$0.65 up to \$0.99 per share, vesting within one year and expiring in ten years from the date of grant. During the year ended December 31, 2015, the Company recognized compensation costs of \$324,000 based on the options that vested.
- During the year ended December 31, 2015, the Company amortized \$366,000 of compensation cost based on the vesting of the options granted to employees and directors in prior years.

#### **Black-Scholes Option Pricing**

The Company used the following average assumptions in its calculation using the Black-Scholes Option Pricing model:

	Years Ended	
	2016	2015
Expected life (years)	5.5	5.0 – 5.5
Risk free interest rate	1.23 – 1.72%	1.56 – 1.72%
Volatility	119 – 121%	106 – 121%
Expected dividend yield	0%	0%

The assumptions used in the Black Scholes models referred to above are based upon the following data: (1) the contractual life of the underlying non-employee options is the expected life. The expected life of the employee option is estimated by considering the contractual term of the option, the vesting period of the option, the employees' expected exercise behavior and the post-vesting employee turnover rate. (2) The expected stock price volatility was based upon the Company's historical stock price over the expected term of the option. (3) The risk free interest rate is based on published U.S. Treasury Department interest rates for the expected terms of the underlying options. (4) The expected dividend yield was based on the fact that the Company has not paid dividends to common shareholders in the past and does not expect to pay dividends to common shareholders in the future.

## Warrants

The following table summarizes certain information about the Company's stock purchase warrants.

	<u>Warrants</u>	<u>Weighted Avg. Exercise Price</u>
Warrants outstanding, January 1, 2015	5,692,087	\$ 0.36
Warrants granted	1,796,667	0.20
Warrants exercised	(200,000)	0.25
Warrants cancelled	(2,877,087)	0.36
Warrants outstanding, December 31, 2015	4,411,667	\$ 0.31
Warrants granted	8,735,225	0.11
Warrants exercised	—	—
Warrants cancelled	(1,700,000)	0.30
Warrants outstanding, December 31, 2016	<u>11,446,892</u>	<u>\$ 0.15</u>

At December 31, 2016 the price of the Company's common stock was \$0.05 per share and the aggregate intrinsic value of the warrants outstanding was \$0. Future unamortized compensation expense on the unvested outstanding warrants at December 31, 2016 is approximately \$3,000.

Warrant Exercise Price Per Share	<u>Outstanding Warrants</u>			<u>Exercisable Warrants</u>	
	Shares	Life (Years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
\$ 0.10 - \$ 0.99	11,446,892	1.1	\$ 0.15	11,346,892	\$ 0.15
\$ 1.00 - \$ 1.99	—	—	\$ —	—	\$ —
	<u>11,446,892</u>		<u>\$ 0.15</u>	<u>11,346,892</u>	<u>\$ 0.15</u>

### Year Ending December 31, 2016

- In January through August 2016, pursuant to terms of convertible notes issued, the Company granted warrants to purchase 7,935,225 shares of common stock with an exercise price of \$0.10 per share, vesting immediately upon grant and expiring one year from the date of grant. See Note 5 for further discussion.
- In February through July 2016 the Company granted warrants to purchase 800,000 shares of common stock to consultants. The options are exercisable starting at \$0.12 per share to \$0.18 per share, 600,000 shares vested immediately and 200,000 shares over vest two years, and expire in one to three years from the date granted. The fair value of these warrants was computed using the Black-Scholes Option Pricing model with the following assumptions: life of 1 year through 10 years; average stock price of \$0.16 per share, average risk free interest rate of 0.82%; average volatility of 110% and dividend yield of 0%. During the year ended December 31, 2016, the Company recognized an expense of \$59,000 based on the fair value of warrants that vested.
- In May 2016, the Company amended the terms of a warrant issued in 2015, extending the expiration date of the warrant by twelve months with no changes to the other terms of the original grant. As a result, the Company recorded the incremental change in the fair value of this warrant before and after the date of the amendment of \$32,000, computed using the Black-Scholes Option Pricing model with the following assumptions: life of 1 year; stock price of \$0.17 per share, average risk free interest rate of 0.81%; average volatility of 97% and dividend yield of 0%. During the year ended December 31, 2016, the Company recognized an expense of \$32,000 based on the fair value of the warrant as amended.
- During the year ended December 31, 2015, the Company amortized \$1,000 of compensation cost based on the vesting of the warrants granted to employees, directors and consultants in prior years.

## **Year Ending December 31, 2015**

- In January 2015, warrants to acquire 200,000 shares of common stock were exercised resulting in gross proceeds of \$50,000.
- In May through December 2015, pursuant to terms of convertible notes issued, the Company granted warrants to purchase 1,796,667 shares with exercise prices of \$0.30 per share and \$0.10 per share, vesting immediately upon grant and expiring one year from the date of grant. See Note 5 for further discussion.
- During the year ended December 31, 2015, the Company amortized \$39,000 of compensation cost based on the vesting of the warrants granted to employees, directors and consultants in prior years.

## **9. Commitments and Contingencies**

We are involved in certain legal proceedings that arise from time to time in the ordinary course of our business. Except for income tax contingencies, we record accruals for contingencies to the extent that our management concludes that the occurrence is probable and that the related amounts of loss can be reasonably estimated. Legal expenses associated with the contingency are expensed as incurred. There is no current or pending litigation of any significance with the exception of the matters that have arisen under, and are being handled in, the normal course of business.

### **Leases**

On August 1, 2013, the Company entered into a non-cancellable lease at a Santa Barbara Facility with a 5-year term, expiring July 31, 2018 at a monthly rent of \$6,000 as amended in February 2014. Effective May 1, 2016, the Company vacated the Santa Barbara Facility and subleased the space through the term of the master lease, terminating July 31, 2018 at \$4,500 per month. The Company subsequently terminated both the master lease and sublease effective March 1, 2017 and as a result, the Company accrued \$6,000 to account for the termination fees in the Santa Barbara Facility lease agreement which is reflected in as part of Accounts Payable and accrued expense on the accompanying consolidated balance sheet.

Effective June 1, 2016, the Company relocated its Santa Barbara office to an office space located at 5266 Hollister Avenue, Suite 219, Santa Barbara, CA 93111, under a twelve-month lease at a lease rate of \$751 per month.

Total rent expense during the years ended December 31, 2016 and 2015, was \$45,000 and \$70,000, respectively which are included as part of Operating Expenses in the attached consolidated statements of operations.

### **Contractual Commitments**

The Company's contractual commitments for future periods, including office leases, minimum guaranteed compensation payments and other agreements as described in the following table and associated footnotes:

Year ending December 31,	Office Lease (1)	License Agreements (2)	Compensation Agreements (3)	Total Obligations
2017	\$ 4,000	\$ 187,500	\$ 536,300	\$ 727,800
2018	–	187,500	598,400	785,900
2019	–	187,500	149,600	373,100
2020	–	187,500	–	187,500
2021	–	187,500	–	187,500
Total	<u>\$ 4,000</u>	<u>\$ 937,500</u>	<u>\$ 1,284,300</u>	<u>\$ 2,225,800</u>

(1) Consists of rent for the Company's Santa Barbara Hollister office expiring on May 31, 2017.

(2) Consists of license maintenance fees to Temple University in the amount of \$187,500 paid annually through the life of the underlying patents or until otherwise terminated by either party.

(3) Consists of base salary and certain contractually-provided benefits, to i) an executive officer, pursuant to an employment agreement at a base annual salary of \$290,000 through March 31, 2017 and severance in the amount of \$580,000 that will be paid through March 31, 2019 pursuant to a separation agreement effective April 1, 2017; ii) an executive officer, pursuant to a two-year employment agreement effective April 1, 2017 at a base annual salary of \$150,000 per year under a two-year contract effective April 1, 2017; iii) an executive officer, pursuant to an employment agreement at a base annual salary of \$158,400 per year; and iv) and a severance agreement of a former officer in the amount of \$15,000.

## 10. Income Taxes

The Company did not provide any Federal and State income tax for the years ended December 31, 2016 and 2015 due to the Company's net losses, other than \$800 for the minimum state tax provision which was reported as part of operating expense in the accompanying statements of operations. A reconciliation of income taxes with the amounts computed at the statutory federal rate follows:

	<u>December 31,</u>	
	<u>2016</u>	<u>2015</u>
Computed tax provision (benefit) at federal statutory rate (34%)	\$ (593,000)	\$ (1,065,000)
State income taxes, net of federal benefit (8.84%)	(154,000)	(277,000)
Valuation allowance	747,800	1,342,800
Income tax provision	<u>\$ 800</u>	<u>\$ 800</u>

The deferred tax assets and deferred tax liabilities recorded on the balance sheet are as follows:

	<u>December 31,</u>	
	<u>2016</u>	<u>2015</u>
Net operating loss carry forwards	\$ 21,552,000	\$ 21,000,000
Stock based compensation	(181,000)	(299,000)
Non-cash interest and financing expenses	(663,000)	(306,000)
Other temporary differences	(81,000)	(151,000)
Valuation allowance	(20,627,000)	(20,233,000)
Total deferred taxes net of valuation allowance	<u>\$ —</u>	<u>\$ —</u>

As of December 31, 2016, the Company had net operating losses available for carry forward for state and federal tax purposes of approximately \$54 million expiring through 2036. These carry forward benefits will be subject to annual limitations due to the ownership change limitations imposed by the Internal Revenue Code and similar state provisions. The annual limitation, if imposed, may result in the expiration of net operating losses before utilization.

As of December 31, 2016, the Company recorded a valuation allowance of \$20,627,000 for its deferred tax assets since the Company believes that such assets did not meet the more likely than not criteria to be recoverable through projected future profitable operations in the foreseeable future.

Effective January 1, 2007, the Company adopted FASB guidance that addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position should be measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The FASB also provides guidance on de-recognition, classification, interest and penalties on income taxes, accounting in interim periods and requires increased disclosures. As of December 31, 2016 and 2015, the Company does not have a liability for unrecognized tax benefits.

The Company files income tax returns in the U.S. federal jurisdiction and the state of California. The Company is subject to U.S. federal or state income tax examinations by tax authorities for years after 2002. During the periods open to examination, the Company has net operating loss and tax credit carry forwards for U.S. federal and state tax purposes that have attributes from closed periods. Since these net operating losses and tax credit carry forwards may be utilized in future periods, they remain subject to examination. The Company's policy is to record interest and penalties on uncertain tax provisions as income tax expense. As of December 31, 2016, the Company has no accrued interest or penalties related to uncertain tax positions. The Company believes that it has not taken any uncertain tax positions that would impact its consolidated financial statements as of December 31, 2016 and 2015.

## **11. Subsequent Events**

### **Grant of Stock Options**

The Company granted members of the Board of Directors stock options to purchase a total of 6,500,000 shares of common stock. The stock options vest over one year, exercisable at \$0.05 and will expire in 10 years. Total fair value of the stock options amounted to \$325,000 which will be expensed over its vesting period.

### **Agreements**

The Company executed employment agreements effective April 1, 2017 with two officers of the Company. The agreements are for a period of two years and will require payment of salary in the aggregate of \$308,000 per year. In addition, the Company also granted these two officers stock options to purchase a total of 3,250,000 shares of common stock. The stock options vest over a two-year period, exercisable at a price range of \$0.07 through \$0.40 per share and will expire in 10 years. Total fair value of the stock options amounted to \$165,000 which will be expensed over its vesting period.

The Company executed a separation agreement and release effective April 1, 2017 with the Company's Chief Executive Officer (CEO). As part of the agreement, the Company agreed to pay the CEO a total of \$613,000 in equal installment basis over 24 months. In addition, the Company also immediately vested the stock option granted to him in January 2017 to purchase 1,000,000 shares of common stock at \$0.05 per share. As a result of the modification, the Company will record stock compensation expense of \$70,000 to account the fair value of the modified options.

A member of the Company's Board of Directors resigned effective April 1, 2017. In lieu of cash for Committee fees payable to the Director, the Company immediately vested the stock option granted to him in January 2017 to purchase 1,500,000 shares of common stock at \$0.05 per share. As a result of the modification, the Company will record stock compensation expense of \$105,000 to account the fair value of the modified options.

### **Issuance of Convertible Notes**

From January 1, 2017 up to March 31, 2017, the Company issued convertible notes in aggregate of \$248,600 in exchange for cash of \$226,000. The notes are unsecured, convertible into 4,972,000 shares in common stock of the Company at a conversion price of \$0.05 per share and mature in one year. In connection with these notes, the Company also issued warrants to purchase 2,486,000 shares of common stock of the Company at an exercise price of \$0.05 per share and expiring one year from the date of issuance. As a result, the Company will record a note discount of \$248,600 to account for the relative fair value of the warrants, the notes' beneficial conversion feature and original issue discount which will be amortized as interest expense over the life of the notes.

### **Conversion of Convertible Notes**

From January 1, 2017 up to March 22 2017, Company issued 1,181,400 shares of common stock upon conversion of previously issued convertible notes in aggregate value of \$59,000.

### **AOT Testing Agreement**

In November 2016, the Company executed an agreement with Cenovus FCCL Limited ("Cenovus"), a Canadian company, for the field testing of the Company's AOT equipment at a fixed cost of \$50,000. As the part of the agreement, Cenovus will pay the Company \$25,000 in January 2017. The balance of \$25,000 will be due upon completion of the test analysis and final report. The field testing was performed in January 2017. Final analysis and test report is scheduled to be completed in April 2017. Upon completion of the field testing and collection of the amount due, the Company will recognize the \$50,000 as revenue.

## EXHIBITS

### **Exhibit No. Description**

10.122	Jason Lane Employment Agreement effective April 1, 2017
10.123	Michael McMullen Employment Agreement effective April 1, 2017
10.124	Bigger Separation Agreement effective April 1, 2017
31.1	Certification of Chief Executive Officer of Annual Report Pursuant to Rule 13(a)—15(e) or Rule 15(d)—15(e).
31.2	Certification of Chief Financial Officer of Annual Report Pursuant to 18 U.S.C. Section 1350.
32.1	Certification of Chief Executive Officer and Chief Financial Officer of Annual Report pursuant to Rule 13(a)—15(e) or Rule 15(d)—15(e).
101.INS	XBRL Instance Document
101.SCH	XBRL Schema Document
101.CAL	XBRL Calculation Linkbase Document
101.DEF	XBRL Definition Linkbase Document
101.LAB	XBRL Label Linkbase Document
101.PRE	XBRL Presentation Linkbase Document

**EMPLOYMENT AGREEMENT**

This Employment Agreement (“Agreement”) is entered into as of April 1, 2017 (the “Effective Date”), by and between QS Energy, Inc. a Nevada corporation (“Employer”) and Jason Lane (“Employee”) (collectively, the “Parties”).

Employee desires to set forth herein the terms and conditions pursuant to which he will agree to employment by Employer, and Employer desires by the terms and conditions of this Agreement to agree to employ Employee.

**AGREEMENT**

NOW, THEREFORE, in consideration of the promises and the mutual covenants hereinafter set forth, the Parties agree as follows:

1. **Employment.**

1.1 **Acceptance of Employment.** Effective the Effective Date, Employer agrees to employ Employee, and Employee agrees to employment with Employer, on the terms and conditions set forth in this Agreement.

1.2 **Duties and Powers.** Employee shall serve as the Company’s Chief Executive Officer (CEO), and in such capacity shall be one of the Company’s senior executive officers. Employee’s duties shall be consistent with such position, including bringing capital in to the Company. In carrying out his duties, Employee shall use Employee’s best efforts, skills, judgment, and abilities, and shall at all times promote the Company’s interest and perform and discharge well and faithfully, those duties. In addition, Employee shall abide by all of the requirements of the Securities and Exchange Commission (“SEC”), and adhere to the policies and requests of the Company with respect thereto, as the same may exist from time to time, applicable to executive officers of public companies. Employee shall perform or do all such duties, services, acts or things necessary or advisable at the direction of Employer and subject at all times to the policies set by the Board of Directors of the Employer (the “Services”).

1.3 **Supervision.** Employee shall report to the Board of Directors of the Employer in connection with the performance of his duties hereunder.

1 . 4 **Location.** Executive shall perform his duties at Employer’s offices located at \_\_\_\_\_, or at such other location as directed by Employer.

1.5 **Hours of Employment.** Employee shall devote his full energies, abilities and productive time to the performance of his duties, which is expected to be, on average, not less than 40 hours each week.

2 . **Confidential Information.** Employee hereby acknowledges that, during and solely as a result of his employment by Employer, he will have access to confidential information and business and professional contacts. Employee hereby agrees as follows:

2.1 **Definition.** “Confidential Information” shall mean any information, tangible or intangible, relating to the business of Employer and its affiliated companies, and their products, finances, budgets, methods, policies, procedures, business, plans, computer or other data, techniques, designs, research or development projects or results, customers or clients, employees, trade secrets, intellectual property, or other knowledge or processes of or developed by Employer and its affiliated companies, and any other confidential information relating to or dealing with the businesses of Employer and its affiliated companies, made known to Employee or learned or acquired by Employee while in the employ of Employer, but Confidential Information shall not include information lawfully known generally by or readily accessible to the trade or the general public.

2.2 **Use.** During the Term (defined below), Employee shall use and disclose Confidential Information only for the benefit of Employer and only as necessary to carry out Employee's responsibilities under this Agreement. After the Term, Employee shall not, directly or indirectly, disclose to any person or entity, or use for the direct or indirect benefit of any person or entity, any Confidential Information, without the express written permission of Employer. At no time shall Employee, directly or indirectly, remove or cause to be removed from the premises of Employer any Confidential Information (including copies, extracts and summaries thereof) except in furtherance of the performance of Employee's duties hereunder.

2.3 **Proprietary Interests.** Employee acknowledges and agrees that all Confidential Information, whether developed by him or others, is and will remain the sole and exclusive property of Employer. Employee further recognizes and agrees that all work performed or work product developed by him in the course of his employment with Employer is and shall remain the sole and exclusive property of Employer. Employee hereby assigns to Employer any rights Employee may have or acquire in such Confidential Information and agrees to sign any additional document(s) that Employer may determine is/are necessary to effectuate such assignment. This Agreement does not apply to an invention by Employee that qualifies as a nonassignable invention under Section 2870 of the California Labor Code.

2.4 **Return of Confidential Information.** Upon the termination of Employee's employment with Employer for any reason, or at the request of Employer before, at or after termination, Employee will promptly deliver to Employer all records, files, memoranda, documents, lists and other information containing any Confidential Information, including all copies or summaries thereof, in Employee's possession or control, whether prepared by Employee or others. Should Employee discover such items in his possession after his separation and departure from employment with Employer, he agrees to return them promptly to Employer without retaining copies.

3. **Term of Employment.** Subject to earlier termination as provided herein, Employee hereby agrees to continue to be employed by Employer for a term of two (2) years ("Term") beginning on the Effective Date of this Agreement, and Employer hereby agrees to employ Employee during such Term.

4. **Compensation.** In consideration for the performance of Employee's duties and the rendition by Employee of the Services to be provided under this Agreement, and in consideration of Employee's agreement to continue his Employment with Employer, Employer shall compensate Employee as follows:

4.1 **Base Salary.** Throughout the Term, Employer shall pay Employee an annual base salary ("Base Salary") of One Hundred Fifty Thousand Dollars (\$150,000). All Base Salary shall be payable ratably in bi-weekly installments, or more or less often in accordance with Employer's standard payroll practices in effect from time to time, net of all amounts required to be withheld by Employer for taxes imposed on Employee pursuant to all applicable laws.

4.2 **Options.** As an inducement to Employee to agree to his employment with Employer pursuant to the terms and conditions of this Agreement, Employer agrees to issue to Employee options to purchase 3,000,000 shares of restricted common stock of the Company (the "Options") The Options shall vest pursuant to a two (2) year vesting schedule, as follows: 500,000 of the Options at \$0.15 per share and 500,000 of the Options at \$0.25 per share, shall vest twelve (12) months from the date hereof, and thereafter 1,000,000 of the Options at \$0.30 per share and 1,000,000 of the Options at \$0.40 per share, shall vest on the two year anniversary of the date hereof. Notwithstanding the foregoing, if this Agreement is terminated for any reason, except for termination by Employer Without Cause (defined below), all unvested Options shall terminate and be of no force or effect. The Options shall expire ten (10) years from the date hereof, and shall be of no force or effect thereafter. In connection with Employee's agreement to accept the Options hereunder, Employee agrees and acknowledges the following:

- (i) Employee is aware of Employer's business affairs and financial condition, and has been advised to review Employer's SEC filings, which may be accessed online at [www.sec.gov](http://www.sec.gov). Employee has had an opportunity to ask questions and receive answers from Employer regarding its business and the Options.
- (ii) Employee acknowledges that the acceptance of the Options involves a high degree of risk, and that the stock to be issued in connection therewith may need to be held for an indefinite period of time.
- (iii) Employee acknowledges that he is acquiring the Options for his personal account, for investment purposes only, and not with a view to or for resale in connection with any distribution of the Options. Employee also understands that the Options and the shares to be issued in connection with the Options will not be registered under federal or state securities laws by reason of specific exemptions thereunder.
- (iv) Employee understands that the Options to be issued and shares to be issued in connection therewith are "restricted securities" under applicable federal securities laws and that Employee may dispose of the shares only pursuant to an effective registration statement under federal securities laws or exemption therefrom.

4.3 **Bonus.** Employee shall be eligible to receive bonus compensation based upon achievement of certain Company goals and Executive's performance ("Bonus Compensation"). Notwithstanding the terms of this Section 4.3, if this Agreement is terminated for any reason prior to the completion of the Term, except for termination by Employer Without Cause (defined below), Employee shall no longer be entitled to any further Bonus Compensation otherwise payable following termination by Employer for any reason except for Without Cause. Employer will award Bonus Compensation to Employee as follows:

- (i) For any lease-based contracts for Employer's AOT Technology, sourced by Employee for Employer, Employee shall receive eight percent (8%) of gross cash flow for eligible contracts signed by the Employer in the first year of the Term, and six percent (6%) of gross cash flow for eligible contracts signed by Employer in the second year of the Term. Any payments due to Employee under this Section 4.3(i) shall be made to Employee on a quarterly basis for so long as the lease contract shall remain in effect.
- (ii) For any AOT Technology sales or other non-lease contracts sourced by Employee for Employer during the Term, Employee shall receive a one-time payment of ten percent (10%) of the net profit of the sale or contract. Any payments due to Employee under this Section 4.3(ii) shall be made with sixty (60) days of receipt of the monies by Employer under the terms of the sale or contract.

4.4 **Reimbursement of Expenses.** Employer agrees to pay, or promptly to reimburse, Employee for all reasonable out-of-pocket business expenses incurred by Employee in connection with the performance of his duties hereunder, including business-related entertainment expenses, travel expenses, food and lodging while away from home, all subject to such reasonable policies as Employer may from time to time determine. Employee agrees that prior to incurring any expense or debt on behalf of Employer, Employee shall comply with such approval policies and procedures as Employer establishes from time to time.

4.5 **Health Benefits.** Employee shall be eligible to receive monthly health benefits, including payment of health insurance premiums, in an amount not to exceed \$888.00 per month. Notwithstanding any other provision in this Agreement, the Employee may elect to participate in, and apply this health benefits allocation to, any group health insurance plan which may be offered to employees of the Company. If the Employee elects not to participate in such group health insurance plan, the Employee shall be paid on the last day of each month during the Term the lesser of (i) \$888.00 and (ii) the sums paid by the Executive in connection with maintain private health insurance for the Executive.

5. **Other Benefits.**

5.1 **General.** In addition to any specific benefits herein granted to Employee, Employee shall be entitled to participate in all benefit programs, if any, such as pension or retirement plans, profit-sharing plans, life insurance, and any other plans or benefits, that Employer provides from time to time to its employees, subject to the terms and conditions of Employer's policies and benefit plans.

5.2 **Vacation.** For work performed, Employee shall earn paid vacation at the rate of two (2) weeks for each calendar year, or prorated portion thereof, as applicable, of his employment. Any vacation time not taken in the year during which it accrues shall cumulate until taken, up to a maximum of four (4) weeks. Once the maximum accrual amount is reached, no further vacation time shall be earned until some vacation is used, and the amount of accrued vacation falls below the permitted maximum. Vacations shall be taken at a time and for a period reasonably convenient to Employer. Except as provided herein, vacation shall be governed by Employer's standard policy on vacation for all full time employees.

5.3 **Illness.** Employee shall be entitled to six (6) days per year as sick leave with full pay. Sick leave may not be cumulated.

6. **Termination of Employment by Employer.** Employer may terminate Employee's employment only for the following reasons:

6.1 **Death.** Upon the death of the Employee.

6.2 **Disability.** After any disability that prevents Employee from fulfilling the essential duties of his position for more than three (3) consecutive months, unless otherwise required by law. It is understood and agreed that Employee will, during the three (3) month period, be provided all vacation time, sick leave and benefits, and any reasonable accommodations that are legally required, and will also be provided during the three (3) month period, subject to Section 7, below, all Base Salary. As used herein, the term "disability" means an illness, injury or similar incapacity of Employee, including, without limitation, physical or mental incompetence, by reason of which Employee is rendered substantially unable to perform his duties hereunder during any consecutive three (3) month period. Employee agrees first to submit to a medical examination by a physician or health care provider selected and paid for by Employer, and any follow up examinations that may be reasonably necessary, solely for the purpose of determining the issue of disability. Thereafter, any dispute as to Employee's disability shall be determined by arbitration pursuant to Section 8.5 hereof.

6.3 **For Cause.** As used herein, "Cause" for termination shall mean Employee's employment is terminated because Employee has: (a) committed any act or omission constituting a material breach of this Agreement; (b) engaged in gross negligence or willful misconduct in connection with the Company's business; (c) been convicted of, or plead guilty or *nolo contendere* in connection with, fraud or any crime that constitutes a felony or that involves moral turpitude or theft; (d) has committed any intentional act of embezzlement, theft, misappropriation of Employer's funds, dishonesty, fraud or unauthorized use of Employer's funds or property; or (e) undertaken any act injurious to the Company's business, including insubordination or failure to follow a directive of the Employer's Board of Directors.

6.4 **Without Cause.** As used herein, "Without Cause" shall mean any termination by Employer, except for termination for Cause, death or disability.

7. **Effect of Termination.**

7.1 **Termination Due to Death or Disability.** If Employee's employment is terminated pursuant to any of Section 6.1 or 6.2 hereof, Employee (or his estate) shall be entitled only to his Base Salary, all earned but unpaid Bonus Compensation, and all compensation attributable to accrued but unused vacation and sick leave, prorated up through the date of such termination. Subject to Section 8.6, as applicable, all other rights and obligations of Employer to Employee and Employee to Employer under this Agreement shall be completely extinguished.

7.2 **Termination For Cause.** If Employee's employment is terminated pursuant to Section 6.3 (for Cause), Employee shall be entitled only to his Base Salary and all compensation attributable to accrued but unused vacation and sick leave, prorated through the date of termination for Cause. Subject to Section 8.6, as applicable, all other rights and obligations of Employer to Employee and Employee to Employer under this Agreement shall be completely extinguished.

7.3 **Employee's Resignation.** In the event Employee resigns from employment prior to the end of the Term of this Agreement for any reason, Employee shall be entitled only to his Base Salary, all earned but unpaid Bonus Compensation, and all compensation attributable to accrued but unused vacation and sick leave, prorated through the last day of employment. Subject to Section 8.6, as applicable, all other rights and obligations of Employer to Employee and Employee to Employer under this Agreement shall be completely extinguished.

7.4 **Without Cause.** If Employee's employment is terminated Without Cause, Employer shall be obligated to pay Employee his Base Salary through the date of expiration of the Term, all earned but unpaid Bonus Compensation, and all compensation attributable to accrued but unused vacation and sick leave, prorated up through the date of termination. Subject to the terms of Section 4.2, all unvested Options shall immediately vest.

8. **Miscellaneous.**

8.1 **Captions.** The captions of the sections hereof are included for convenience only and shall not affect the construction or interpretation of any provisions hereof.

8.2 **Notices.** All notices, requests, demands, consents, approvals and other communications required or permitted under this Agreement shall be in writing and shall be deemed given upon receipt if delivered personally or by courier, by fax (if a fax number is indicated and confirmation of the transmission is received by the sender) or three days after being mailed, certified or registered, postage prepaid, return receipt requested, to the party to whom the same is so delivered or mailed, as follows:

8.2.1 If to Employer:  
QS Energy, Inc.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attn:  
Michael McMullen, CFO

8.2.2 If to Employee:  
JASON LANE  
\_\_\_\_\_  
\_\_\_\_\_

or to such other address or fax number as any of the above shall have specified by notice duly given hereunder.

8.3 **Severability.** Should any provisions or portion of this Agreement be held unenforceable or invalid for any reason by an arbitrator or court of competent jurisdiction, that provision shall be deemed modified to the extent necessary to allow enforceability of the provision as so limited, it being the intention of the parties that they should receive the benefits contemplated by this Agreement to the fullest extent permitted by law. If a deemed modification is not satisfactory in the judgment of the arbitrator or court, the provision shall be deemed deleted and the validity and enforceability of the remaining provisions and portions of this Agreement shall be unaffected by such holding.

8.4 **Waivers.** Neither party hereto shall be deemed as a consequence of any act, delay, failure, omission, forbearance or other indulgences granted from time to time by the other party hereto: (a) to have waived, or to be estopped from exercising, any of its rights or remedies under this Agreement; or (b) to have modified, changed, amended, terminated, rescinded, or superseded any of the terms of this Agreement, unless such waiver modification, etc. is expressed, in writing and signed by the party that is to be bound thereby. No single or partial exercise by either party hereto of any right or remedy will preclude any other or further exercise thereof or preclude the exercise of any other right or remedy, and a waiver expressly made in writing on one occasion will be effective only in that specific instance and only for the precise purpose for which given, and will not be construed as a consent to or a waiver of any right or remedy on any future occasion or a waiver of any right or remedy against the other party.

8.5 **Arbitration.**

8.5.1 **Arbitrable Claims.** To the fullest extent permitted by law, all disputes between Employee (and his heirs and assigns) and Employer relating in any manner whatsoever to the employment or termination of Employee by Employer, including, without limitation, all disputes arising under this Agreement (“Arbitrable Claims”), shall be resolved by arbitration. Arbitrable Claims shall include, but are not limited to, contract (express or implied) and tort claims of all kinds, as well as all claims based on any federal, state or local law, statute or regulation, to the fullest extent permitted by law and excepting claims under applicable workers’ compensation law and unemployment insurance claims.

8.5.2 **Procedure.** Arbitration of Arbitrable Claims shall be in accordance with the then current National Rules for the Resolution of Employment Disputes of the American Arbitration Association, as amended (“AAA Employment Rules”), as augmented in this Agreement. Arbitration shall be initiated as provided by the AAA Employment Rules, although the written notice to the other party initiating arbitration shall also include a statement of the claim(s) asserted and the facts upon which the claim(s) are based. The Arbitration shall be final and binding upon the parties and shall be the exclusive remedy for all Arbitrable Claims. Either party may bring an action in court to compel arbitration under this Agreement and to enforce an arbitration award. Otherwise, neither party shall initiate or prosecute any lawsuit or administrative action in any way related to any Arbitrable Claim. Notwithstanding the foregoing, either party may, at its option, seek injunctive relief pursuant to section 1281.8 of the California Code of Civil Procedure. All arbitration hearings under this Agreement shall be conducted in Los Angeles County, California. THE PARTIES HEREBY WAIVE ANY RIGHTS THEY MAY HAVE TO TRIAL BY JURY IN REGARD TO ARBITRABLE CLAIMS, INCLUDING, WITHOUT LIMITATION, ANY RIGHT TO TRIAL BY JURY AS TO THE MAKING, EXISTENCE, VALIDITY OR ENFORCEABILITY OF THE AGREEMENT TO ARBITRATE.

8.5.3 **Arbitrator Selection and Authority.** All disputes involving Arbitrable Claims shall be decided by a single arbitrator. The arbitrator shall be selected by mutual agreement of the parties within thirty (30) days of the effective date of the notice initiating the arbitration. If the parties cannot agree on an arbitrator, then the complaining party shall notify the AAA and request selection of an arbitrator in accordance with AAA Employment Rules. The arbitrator shall have authority to award equitable relief, damages, costs and fees to the same extent that, but not greater than, a state or federal district court in California would have. The fees of the arbitrator shall be split between both parties equally, unless this would render this Section of Arbitration unenforceable, in which case the arbitrator shall apportion said fees and any statutory remedies so as to preserve enforceability. The arbitrator shall have exclusive authority to resolve all Arbitrable Claims, including, but not limited to, whether any particular claim is arbitrable and whether all or any part of this Agreement is void or unenforceable. Upon completion of the arbitration proceedings, the arbitrator shall issue a written report to both parties which reveals the essential findings and conclusions upon which any award was based.

8.6 **Continuing Obligations.** The rights and obligations of Employee and Employer set forth in Section 2 and subparts (Confidential Information), Section 4 and subparts (Compensation), Section 7 and subparts (Effect of Termination) and Section 8 and subparts (including Arbitration and other Miscellaneous provisions) and any other provision which by its terms are intended to continue shall survive the termination of Employee's employment and the expiration of this Agreement to the extent reasonably necessary to enforce the terms of this Agreement.

8.7 **Attorney's Fees.** In the event that either of the parties hereto (or any successor thereto) resorts to legal action, including arbitration, in order to enforce, defend or interpret any of the terms or the provisions of this Agreement, the prevailing party shall be entitled to an award of reasonable attorneys fees if otherwise provided by law and the arbitrator determines such an award is warranted. In addition, when attorneys fees are awarded by the arbitrator, the prevailing party shall be entitled to recover from the non-prevailing party post-judgment attorneys' fees incurred by the prevailing party in enforcing a judgment against the non-prevailing party. Notwithstanding anything in this Agreement to the contrary, the provisions of the preceding sentence are intended to be severable from the balance of this Agreement, shall survive any judgment rendered in connection with the aforesaid legal action, and shall not be merged into any such judgment.

8.8 **Entire Agreement; Amendment.** This Agreement embodies the entire agreement and understanding of the parties hereto with respect to the subject matter herein and supercedes all prior or contemporaneous oral or written understandings and agreements of the Parties. This Agreement cannot be amended or terminated orally, but only by a writing duly executed by the parties hereto.

8.9 **Applicable Law.** This Agreement shall be governed by, and construed and enforced in accordance with, the internal laws of the state of California.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

"EMPLOYER"

QS ENERGY, INC.

By: /s/ MICHAEL MCMULLEN  
Michael McMullen, CFO

"EMPLOYEE"

/s/ JASON LANE  
Jason Lane

**EMPLOYMENT AGREEMENT**

This Employment Agreement (“Agreement”) is entered into as of April 1, 2017 (the “Effective Date”), by and between QS Energy, Inc., a Nevada corporation (“Employer” or “Company”) and Michael McMullen (“Employee”) (collectively, the “Parties”).

Employee desires to set forth herein the terms and conditions pursuant to which he will agree to continued employment by Employer, and Employer desires by the terms and conditions of this Agreement to agree to continue to employ Employee.

**AGREEMENT**

NOW, THEREFORE, in consideration of the promises and the mutual covenants hereinafter set forth, the Parties agree as follows:

1. **Prior Agreements.** This Agreement supersedes and replaces any written or oral employment or consulting agreements between the Parties effective prior to Effective Date (“Prior Agreements”) in their entirety, if any, it being expressly agreed and understood that any Prior Agreements are hereby terminated and cancelled and of no further force or effect, and that all obligations thereunder have been satisfied in full by the Parties.
2. **Employment.**
  - 2.1. **Acceptance of Employment.** As of the Effective Date, Employer agrees to continue to employ Employee, and Employee agrees to continued employment with Employer, on the terms and conditions set forth in this Agreement.
  - 2.2. **Position and Title.** Employer hereby hires Employee to serve as Chief Financial Officer of the Company.
  - 2.3. **Duties and Powers.** Employee shall perform his duties as Chief Financial Officer of the Company pursuant to this Agreement in compliance with applicable law and consistent with such budgets, policies and procedures as the Company's Board of Directors adopts and modifies from time to time. Subject to directions from the Chief Executive Officer and to the power and authority of the Company's Board of Directors to govern the affairs of the Company, Employee shall have full authority and responsibility for supervising and managing the financial affairs of the Company, including (i) preparing and delivering to the Board of Directors accurate financial statements at such time and with such detail as the Board of Directors may request, (ii) supervising the Company's engagement of and relationship with its independent certified public accountants, (iii) supervising the Company's collection of receivables, deposit of funds, and payment of expenses, (iv) preparing such forecasts as the Company's Chief Executive Officer or Board of Directors may request, (v) ensuring that the Company's financial affairs are conducted in compliance with applicable law, (vi) with the Company's Chief Executive Officer and the Board, leading capital raising efforts for the Company as well as providing such due diligence and other material that the Company's Chief Executive Officer or Board may require in support of their respective capital raising efforts; and (vii) exercising such other authority and responsibility as the Company's Chief Executive Officer may delegate to Employee from time to time; together these duties are herein referred to as the “Services.”
  - 2.4. **Supervision.** Employee shall report to the Company's Chief Executive Officer or his designee.
  - 2.5. **Work Location.** Executive shall perform his duties at Employer's offices located in the city of Tiburon, California. Employee acknowledges and agrees that from time to time he shall be required to travel (at the cost and expense of the Company) to other locations outside of Tiburon, California, in order to discharge his duties under this Agreement.

- 2.6. **Relocation.** As used herein, Relocation shall mean relocation of Work Location to a location more ten (10) miles outside of Work Location described in Section 2.5 above.
- 2.7. **Business Time.** Employee shall devote his abilities and business time to the performance of his duties, on average, not less than 32 hours each week.
3. **Confidential Information.**
- 3.1. Employee hereby acknowledges that, during and solely as a result of his employment by Employer, he will have access to confidential information and business and professional contacts. Employee hereby agrees as follows:
- 3.1.1. **Definition.** “Confidential Information” shall mean any information, tangible or intangible, relating to the business of Employer and its affiliated companies, and their products, finances, budgets, methods, policies, procedures, business, plans, computer or other data, techniques, research or development projects or results, customers or clients, employees, trade secrets, or other knowledge or processes of or developed by Employer and its affiliated companies, and any other confidential information relating to or dealing with the businesses of Employer and its affiliated companies, made known to Employee or learned or acquired by Employee while in the employ of Employer, but Confidential Information shall not include information lawfully known generally by or readily accessible to the trade or the general public.
- 3.1.2. **Use.** During the Term of employment (defined below), Employee shall use and disclose Confidential Information only for the benefit of Employer and only as necessary to carry out Employee’s responsibilities under this Agreement. After the Term of employment, Employee shall not directly or indirectly, disclose to any person or entity, or use for the direct or indirect benefit of any person or entity, any Confidential Information, without the express written permission of Employer. At no time shall Employee, directly or indirectly, remove or cause to be removed from the premises of Employer any Confidential Information (including copies, extracts and summaries thereof) except in furtherance of the performance of Employee’s duties hereunder.
- 3.1.3. **Proprietary Interests.** Employee acknowledges and agrees that all Confidential Information, whether developed by him or others, is and will remain the sole and exclusive property of Employer. Employee further recognizes and agrees that all work performed or work product developed by him in the course of his employment with Employer is and shall remain the sole and exclusive property of Employer. Employee hereby assigns to Employer any rights Employee may have or acquire in such Confidential Information and agrees to sign any additional document(s) that Employer may determine is/are necessary to effectuate such assignment. This Agreement does not apply to an invention by Employee that qualifies as a nonassignable invention under Section 2870 of the California Labor Code.
- 3.1.4. **Return of Confidential Information.** Upon the termination of Employee’s employment with Employer for any reason, or at the request of Employer before, at or after termination, Employee will promptly deliver to Employer all records, files, memoranda, documents, lists and other information containing any Confidential Information, including all copies or summaries thereof, in Employee’s possession or control, whether prepared by Employee or others. Should Employee discover such items in his possession after his separation and departure from employment with Employer, he agrees to return them promptly to Employer without retaining copies.
4. **Term of Employment.** Subject to earlier termination as provided herein, Employee hereby agrees to continue to be employed by Employer for a term of two (2) years (“Term”) beginning on the Effective Date of this Agreement, and Employer hereby agrees to employ Employee during such Term.

5. **Compensation.** In consideration for the performance of Employee's duties and the rendition by Employee of the services to be provided under this Agreement, and in consideration of Employee's agreement to continue his Employment with Employer, Employer shall compensate Employee as follows:
- 5.1. **Base Salary.** Throughout the Term of employment, Employer shall pay Employee an annual base salary ("Base Salary") of One Hundred Fifty-Eight Thousand Four Hundred Dollars (\$158,400).
- 5.2. **Stock Options.** As an inducement to Employee to agree to his employment with Employer pursuant to the terms and conditions of this Agreement, Employer agrees to issue to Employee an option to purchase 250,000 shares of restricted common stock of the Company at a per-share exercise price equal to the stock price listed on the OTCBB market at market close on the Effective Date of this Agreement (the "Options"). The Options shall vest pursuant to a one (1) year vesting schedule, as follows: fifty percent (50%) of the Options, i.e., 125,000 shares, shall vest immediately upon the Effective Date of this Agreement, and thereafter the remaining fifty percent (50%) of the Options shall vest upon the first anniversary of the Effective Date. Notwithstanding the foregoing, if this Agreement is terminated for any reason, except for termination by Employer Without Cause (defined below), all unvested Options shall terminate and be of no force or effect. The Options shall expire ten (10) years from the Effective Date, and shall be of no force or effect thereafter. In connection with Employee's agreement to accept the Options hereunder, Employee agrees and acknowledges the following:
- 5.2.1. Employee is aware of Employer's business affairs and financial condition, and has been advised to review Employer's SEC filings, which may be accessed online at [www.sec.gov](http://www.sec.gov). Employee has had an opportunity to ask questions and receive answers from Employer regarding its business and the Options.
- 5.2.2. Employee acknowledges that the acceptance of the Options involves a high degree of risk, and that the stock to be issued in connection therewith may need to be held for an indefinite period of time.
- 5.2.3. Employee acknowledges that he is acquiring the Options shares for his personal account, for investment purposes only, and not with a view to or for resale in connection with any distribution of the Options. Employee also understands that the shares to be issued in connection with the Options will not be registered under federal or state securities laws by reason of specific exemptions thereunder.
- 5.2.4. Employee understands that the Options to be issued and shares to be issued in connection therewith are "restricted securities" under applicable federal securities laws and that Employee may dispose of the shares only pursuant to an effective registration statement under federal securities laws or exemption therefrom.
- 5.3. **Manner of Payment.** All Base Salary shall be payable ratably in bi-weekly installments, or more or less often in accordance with Employer's standard payroll practices in effect from time to time, net of all amounts required to be withheld by Employer for taxes imposed on Employee pursuant to all applicable laws.
- 5.4. **Reimbursement of Expenses.** Employer agrees to pay, or promptly to reimburse, Employee for all reasonable out-of-pocket business expenses incurred by Employee in connection with the performance of his duties hereunder, including business-related entertainment expenses, travel expenses, food and lodging while away from home, all subject to such reasonable policies as Employer may from time to time determine. Employee agrees that prior to incurring any expense or debt on behalf of Employer, Employee shall comply with such approval policies and procedures as Employer establishes from time to time.

6. **Other Benefits.**

- 6.1. **General.** Employer shall provide medical insurance and dental insurance benefits, unless participation in such medical insurance and/or dental insurance benefits is waived by Employee. In addition, Employee shall be entitled to participate in all other benefit programs, if any, such as pension or retirement plans, profit-sharing plans, life insurance, and any other plans or benefits, that Employer provides from time to time to its employees, subject to the terms and conditions of Employer's policies and benefit plans.
- 6.2. **Vacation.** Employee shall accrue paid vacation in each period of twelve (12) consecutive months of employment during the term of this Agreement in accordance with the terms of the Company's vacation accrual policies and limits.
- 6.3. **Illness.** Employee shall be entitled to five (5) days per year as sick leave or personal choice with full pay. Sick leave may not be cumulated.

7. **Termination of Employment by Employer.** Employer may terminate Employee's employment only for the following reasons:

- 7.1. **Death.** Upon the death of the Employee.
- 7.2. **Disability.** As used herein, Disability or Disabled shall mean that Employee either (i) is unable to engage in any substantial gainful activity due to physical or mental impairment which can be expected to result in death or to last for a continuous period of twelve (12) months or more, or (ii) is, by reason of any medically determinable physical mental impairment which can be expected to last for a continuous period of not less than twelve (12) months, receiving income replacement benefits for a period of not less than three months under an accident and health plan sponsored by the Company. Employee covenants and agrees to submit to a reasonable physical examination by such licensed medical doctor for the purpose of evaluating whether Employee is Disabled.
- 7.3. **Cause.** As used herein, Cause shall mean (i) the willful failure by Employee to substantially perform his duties with the Company (other than any such failure resulting from Employee's incapacity due to physical or mental illness), (ii) the willful engaging by Employee in conduct which is demonstrably and materially injurious to the Company, monetarily or otherwise, (iii) Employee's conviction of, or plea of nolo contendere to, a felony or a crime involving moral turpitude, or (iv) Employee's gross misconduct.
- 7.4. **Without Cause.** As used herein, Without Cause shall mean any termination by Employer, except for termination for Cause, Death or Disability.

8. **Effect of Termination.**

- 8.1. **Termination Due to Death or Disability.** If Employee's employment is terminated pursuant to any of Section 7.1 or 7.2 hereof, Employee (or his estate) shall be entitled only to his Base Salary, and all compensation attributable to accrued but unused vacation and sick leave, prorated up through the date of such termination. Subject to Section 9.6, as applicable, all other rights and obligations of Employer to Employee and Employee to Employer under this Agreement shall be completely extinguished.
- 8.2. **Termination For Cause.** If Employee's employment is terminated pursuant to Section 7.3 (for Cause), Employee shall be entitled only to his Base Salary and all compensation attributable to accrued but unused vacation and sick leave, prorated through the date of termination for Cause. Subject to Section 9.6, as applicable, all other rights and obligations of Employer to Employee and Employee to Employer under this Agreement shall be completely extinguished.
- 8.3. **Employee's Resignation.** In the event Employee resigns from employment prior to the end of the Term of this Agreement for any reason, Employee shall be entitled only to his Base Salary and all compensation attributable to accrued but unused vacation and sick leave, prorated through the last day of employment. Subject to Section 9.6, as applicable, all other rights and obligations of Employer to Employee and Employee to Employer under this Agreement shall be completely extinguished.

8.4. **Without Cause.** As used herein, Without Cause shall mean any termination by Employer, except for termination for Cause, Death or Disability. Relocation as defined in Section 2.6 without Employee's consent will constitute termination Without Cause. If Employee's employment is terminated Without Cause, Employer shall be obligated to pay Employee his Base Salary through the date of expiration of the Term, and all compensation attributable to accrued but unused vacation and sick leave, prorated up through the date of termination, and continue to provide full benefits through the date of termination.

9. **Miscellaneous.**

9.1. **Captions.** The captions of the sections hereof are included for convenience only and shall not affect the construction or interpretation of any provisions hereof.

9.2. **Notices.** All notices, requests, demands, consents, approvals and other communications required or permitted under this Agreement shall be in writing and shall be deemed given upon receipt if delivered personally or by courier, or three days after being mailed, certified or registered, postage prepaid, return receipt requested, to the party to whom the same is so delivered or mailed, as follows:

If to Employer:  
QS Energy, Inc.

If to Employee:  
Michael McMullen

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

or to such other address as any of the above shall have specified by notice duly given hereunder.

9.3. **Severability.** Should any provisions or portion of this Agreement be held unenforceable or invalid for any reason by an arbitrator or court of competent jurisdiction, that provision shall be deemed modified to the extent necessary to allow enforceability of the provision as so limited, it being the intention of the parties that they should receive the benefits contemplated by this Agreement to the fullest extent permitted by law. If a deemed modification is not satisfactory in the judgment of the arbitrator or court, the provision shall be deemed deleted and the validity and enforceability of the remaining provisions and portions of this Agreement shall be unaffected by such holding.

9.4. **Waivers.** Neither party hereto shall be deemed as a consequence of any act, delay, failure, omission, forbearance or other indulgences granted from time to time by the other party hereto: (a) to have waived, or to be estopped from exercising, any of its rights or remedies under this Agreement; or (b) to have modified, changed, amended, terminated, rescinded, or superseded any of the terms of this Agreement, unless such waiver modification, etc. is expressed, in writing and signed by the party that is to be bound thereby. No single or partial exercise by either party hereto of any right or remedy will preclude any other or further exercise thereof or preclude the exercise of any other right or remedy, and a waiver expressly made in writing on one occasion will be effective only in that specific instance and only for the precise purpose for which given, and will not be construed as a consent to or a waiver of any right or remedy on any future occasion or a waiver of any right or remedy against the other party.

9.5. **Arbitration.**

9.5.1. **Arbitrable Claims.** To the fullest extent permitted by law, all disputes between Employee (and his heirs and assigns) and Employer relating in any manner whatsoever to the employment or termination of Employee by Employer, including, without limitation, all disputes arising under this Agreement ("Arbitrable Claims), shall be resolved by arbitration. Arbitrable Claims shall include, but are not limited to, contract (express or implied) and tort claims of all kinds, as well as all claims based on any federal, state or local law, statute or regulation, to the fullest extent permitted by law and excepting claims under applicable workers' compensation law and unemployment insurance claims.

- 9.5.2. Procedure. Arbitration of Arbitrable Claims shall be in accordance with the then current National Rules for the Resolution of Employment Disputes of the American Arbitration Association, as amended (“AAA Employment Rules”), as augmented in this Agreement. Arbitration shall be initiated as provided by the AAA Employment Rules, although the written notice to the other party initiating arbitration shall also include a statement of the claim(s) asserted and the facts upon which the claim(s) are based. The Arbitration shall be final and binding upon the parties and shall be the exclusive remedy for all Arbitrable Claims. Either party may bring an action in court to compel arbitration under this Agreement and to enforce an arbitration award. Otherwise, neither party shall initiate or prosecute any lawsuit or administrative action in any way related to any Arbitrable Claim. Notwithstanding the foregoing, either party may, at its option, seek injunctive relief pursuant to section 1281.8 of the California Code of Civil Procedure. All arbitration hearings under this Agreement shall be conducted in Los Angeles County, California. THE PARTIES HEREBY WAIVE ANY RIGHTS THEY MAY HAVE TO TRIAL BY JURY IN REGARD TO ARBITRABLE CLAIMS, INCLUDING, WITHOUT LIMITATION, ANY RIGHT TO TRIAL BY JURY AS TO THE MAKING, EXISTENCE, VALIDITY OR ENFORCEABILITY OF THE AGREEMENT TO ARBITRATE.
- 9.5.3. **Arbitrator Selection and Authority.** All disputes involving Arbitrable Claims shall be decided by a single arbitrator. The arbitrator shall be selected by mutual agreement of the parties within thirty (30) days of the effective date of the notice initiating the arbitration. If the parties cannot agree on an arbitrator, then the complaining party shall notify the AAA and request selection of an arbitrator in accordance with AAA Employment Rules. The arbitrator shall have authority to award equitable relief, damages, costs and fees to the same extent that, but not greater than, a state or federal district court in California would have. The fees of the arbitrator shall be split between both parties equally, unless this would render this Section of Arbitration unenforceable, in which case the arbitrator shall apportion said fees and any statutory remedies so as to preserve enforceability- The arbitrator shall have exclusive authority to resolve all Arbitrable Claims, including, but not limited to, whether any particular claim is arbitrable and whether all or any part of this Agreement is void or unenforceable. Upon completion of the arbitration proceedings, the arbitrator shall issue a written report to both parties which reveals the essential findings and conclusions upon which any award was based.
- 9.6. **Continuing Obligations.** The rights and obligations of Employee and Employer set forth in Section 3 and subparts (Confidential Information), Section 5 and subparts (Compensation), Section 8 and subparts (Effect of Termination) and Section 9 and subparts (including Arbitration and other Miscellaneous provisions) and any other provision which by its terms are intended to continue shall survive the termination of Employee’s employment and the expiration of this Agreement to the extent reasonably necessary to enforce the terms of this Agreement.
- 9.7. **Attorney’s Fees.** In the event that either of the parties hereto (or any successor thereto) resorts to legal action, including arbitration, in order to enforce, defend or interpret any of the terms or the provisions of this Agreement, the prevailing party shall be entitled to an award of reasonable attorney’s fees if otherwise provided by law and the arbitrator determines such an award is warranted. In addition, when attorney’s fees are awarded by the arbitrator, the prevailing party shall be entitled to recover from the non-prevailing party post-judgment attorneys’ fees incurred by the prevailing party in enforcing a judgment against the non-prevailing party. Notwithstanding anything in this Agreement to the contrary, the provisions of the preceding sentence are intended to be severable from the balance of this Agreement, shall survive any judgment rendered in connection with the aforesaid legal action, and shall not be merged into any such judgment.
- 9.8. **Entire Agreement; Amendment.** This Agreement embodies the entire agreement and understanding of the parties hereto with respect to the subject matter herein and supercedes all prior or contemporaneous oral or written understandings and agreements of the Parties. This Agreement cannot be amended or terminated orally, but only by a writing duly executed by the parties hereto.

9.9. **Applicable Law.** This Agreement shall be governed by, and construed and enforced in accordance with, the internal laws of the State of California.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

By QS Energy (Employer):

By Employee:

/s/ JASON LANE  
Jason Lane, CEO

/s/ MICHAEL MCMULLEN  
Michael McMullen

**SEPARATION AGREEMENT AND RELEASE**

This Separation Agreement and Release (the "Agreement") is entered into effective as of April 1, 2017 ("Effective Date"), by and between Gregory M. Bigger (the "Employee") and QS Energy, Inc., a Nevada corporation (the "Company"), to establish the terms and conditions of the Parties' separation, settlement and release of all claims. Employee and Company are sometimes referred to as the "Parties."

**RECITALS**

A. WHEREAS, prior to the Effective Date Employee was employed by Company as its Chief Executive Officer, and also served as a Director and Chairman of the Board of the Company;

B. WHEREAS, as of the Effective Date, Employee's employment and directorship relationship with the Company was mutually terminated by Company and Employee;

C. WHEREAS, Employee entered into that certain Employment Agreement with the Company, dated February 1, 2012, as amended on September 1, 2013, and March 10, 2016. (The Employment Agreement and all amendments thereto are hereinafter referred to collectively as the "Employment Agreement and Amendments.")

D. WHEREAS, the Parties acknowledge that this Agreement is motivated by the desire of the Parties to create an amicable separation between them, and in this regard, the Parties desire to resolve and settle all matters related to Employee's separation from the Company as an employee and director, including, without limitation, any and all claims and potential claims that the Employee may have against the Company and related parties, and vice versa, upon the terms and conditions hereinafter set forth.

**AGREEMENT**

NOW THEREFORE, the Parties, in consideration of the promises, covenants and agreements contained herein and upon execution of this Agreement, agree as follows:

1. Employee Separation

Employee and Company hereby acknowledge and agree that Employee's last day of employment with Company, and last day serving as a director and chairman of the Company, is the Effective Date. Employee is to provide no services to or on behalf of Company as an employee or director after the Effective Date. Following the Effective Date, the Parties may elect to enter into an independent contractor relationship.

2. Illness or Injury

Employee certifies that Employee has not experienced any job related illness or injury in connection with his prior employment with Company.

3. Employment Agreement and Amendments Thereto

As of the Effective Date, the Employment Agreement and Amendments are terminated and all rights and obligations of the Parties thereto are extinguished and of no further force or effect. Employee shall be allowed to retain, as of the Effective Date, all vested Company options and warrants. Unvested options and warrants shall immediately vest.

4. Payment

Subject to the terms and conditions hereof, Company agrees:

(a) Pursuant to Section 4.11 of the Employment Agreement and Amendments, to pay to Employee the sum of Five Hundred Eighty Thousand Dollars (\$580,000.00), less all applicable tax withholdings ("Termination Payment"). The Termination Payment shall be paid in twenty-four (24) equal monthly installments commencing on the Effective Date. The Termination Payment constitutes the sole and total amount to be paid to Employee, and no other sums are due or shall be paid to him, except as provided in subsections 4(b) and (c), below.

(b) Commencing as of the Effective Date and continuing for twenty-four (24) months thereafter, Employee shall be entitled to participate in any group health insurance plan which has been or may be offered to employees of the Company, including dental coverage, at the same level and cost of coverage Employee had while employed with the Company.

(c) Commencing as of the Effective Date and continuing for twelve (12) months thereafter, Employee shall be entitled to the continued exclusive use of a Company-issued cell phone, including a service plan, and email address, at the same level of service Employee had while employed with the Company.

(d) Company shall also pay Employee the sum of \$33,462, less all applicable tax withholdings, on the Effective Date, representing Employee's accrued vacation and sick days. This amount shall be paid at the same installment schedule as the Termination Payment, pursuant to Section (a) above.

5. Mutual Release

(a) Except for the duties, representations, warranties and covenants set forth in this Agreement, and in consideration thereof, the Parties, each on behalf of himself or itself and present and former agents, successors, assigns, heirs and attorneys, fully and completely, irrevocably and unconditionally, releases and forever discharges each other and each of their respective present and former agents, employees, predecessors, successors, shareholders, assigns, officers, partners, directors, heirs, affiliates, subsidiaries, insurers and attorneys (collectively referred to as the "Released Parties") from any and all debts, liabilities, demands, damages, obligations, costs, attorneys' fees, expenses, liens, actions and causes of action of every kind and nature (collectively, "Claims"), whether now known or unknown, suspected or unsuspected, whether or not heretofore asserted, which the Parties and their successors, assigns, heirs and attorneys in their capacity as such now hold or own, or have held or owned with respect to any matter whatsoever. This release is intended to be a general mutual release of any and all Claims.

(b) The Parties acknowledge that, following execution of this Agreement, either Party may discover matters which, had the same been known before the execution, would have caused that Party not to execute the Agreement. Nevertheless, the Parties, each on behalf of himself or itself and present and former agents, successors, assigns, heirs and attorneys in their capacity as such, assumes this risk and hereby acknowledges that each Party has been informed by his own attorneys regarding, and understands the provisions of Section 1542 of the California Civil Code, which states:

A GENERAL RELEASE DOES NOT EXTEND TO ACTIONS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

(c) The Parties, each on behalf of himself or itself and present and former agents, successors, assigns, heirs and attorneys, expressly waives and relinquishes all rights and benefits arising from said Section 1542 and from any and all other laws of similar effect.

(d) The Employee further agrees that this release is written in a manner that he can understand, that he was advised to consult counsel and that he has consulted with counsel in connection with the Agreement.

(e) The Company further agrees that this release is written in a manner that it can understand, that the Company was advised to consult counsel and that it has consulted with counsel in connection with the Agreement.

(f) The Employee agrees he has been given up to twenty-one (21) days to consider whether to sign this Agreement and the Employee understands that he may revoke the Agreement within seven (7) days after signing it by sending written notice of revocation by overnight delivery. This seven (7) day period shall be known as the "Revocation Period."

(g) The Employee acknowledges and agrees that signing this Agreement serves as a release, without limitation, of any and all employment related claims, including, but not limited to claims for wrongful discharge of employment; termination in violation of public policy; discrimination, harassment; retaliation; breach of contract (both express and implied), breach of covenant of good faith and fair dealing (both express and implied), promissory estoppel, negligent or intentional infliction of emotional distress, fraud, negligent or intentional misrepresentation, negligent or intentional interference with contract or prospective economic advantage, unfair business practices, defamation, libel, slander, negligence, personal injury, assault, battery, invasion of privacy, false imprisonment, conversion, disability benefits, and wage and hour violation; violation of any federal, state, or municipal statute, including, but not limited to: Title VII of the Civil Rights Act of 1964; the Civil Rights Act of 1991; the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; the Equal Pay Act; the Fair Labor Standards Act, except as prohibited by law; the Fair Credit Reporting Act; the Age Discrimination in Employment Act of 1967; the Older Workers Benefit Protection Act; the Employee Retirement Income Security Act of 1974; the Worker Adjustment and Retraining Notification Act; the Family and Medical Leave Act, except as prohibited by law; the Sarbanes-Oxley Act of 2002; the Uniformed Services Employment and Reemployment Rights Act; the California Family Rights Act; the California Labor Code, except as prohibited by law; the California Workers' Compensation Act, except as prohibited by law; and the California Fair Employment and Housing Act.

(h) This Agreement shall not be construed to prohibit the Employee from filing a charge against any Released Party with the Equal Employment Opportunity Commission or a comparable state or local agency, or participating in any investigation or proceeding conducted by any of those agencies. However, the Employee explicitly waives his right to receive any monetary damages, costs or fees as a result of any charge, complaint, or lawsuit filed by the Employee or by anyone else on his behalf, except for claims for workers' compensation.

(i) Except as otherwise provided in paragraph (g), the Parties agrees that they will not voluntarily participate in any judicial or legal proceeding against any of the Released Parties that in any way involves any allegations, facts or issues that each could have raised as of the date the employment relationship ended on the Effective Date.

#### 6. Non-Liability

This Agreement is not to be construed as an admission of liability or wrongdoing by the Company and the Company expressly denies any liability or wrongdoing in connection with the subject matter of this Agreement.

7. Non-Disparagement

The Employee agrees not to disparage, demean or criticize the Company, or any of the Released Parties at any time for any reason. The Company agrees not to disparage, demean or criticize the Employee at any time for any reason.

8. Non-Disclosure

The Employee agrees not to discuss, publicize, describe or otherwise communicate the terms, conditions or content of the Agreement except as otherwise publicly disclosed by the Company under federal securities laws.

9. No Assignment

The Employee represents and warrants that he is the lawful owner of all matters being settled herein and that he has not sold, pledged, assigned, conveyed or transferred, nor attempted to sell, pledge, assign, convey or transfer, and will not sell, pledge, assign, convey or transfer any of the matters released or settled herein prior to the execution of this Agreement.

10. No Waiver

No waiver by the Parties to this Agreement of any breach of any term of this Agreement shall be construed to be, nor be a waiver of any preceding, concurrent, or succeeding breach of the same, or any other term or provision thereof. No waiver shall be binding unless in writing and signed by all Parties.

11. California Law Controlling/Venue

This Agreement shall be considered to have been executed and delivered, and to be wholly performed, in the state of California, and the rights and obligations of the Parties shall be construed and enforced in accordance with, and governed by, the internal, substantive laws of the state of California without regard to the principles of the conflicts of laws thereunder. Any action to enforce the terms of this Agreement shall be brought in an appropriate court in the state of California.

12. Survival

Any of the terms, covenants, representations and warranties contained in the Agreement shall survive the execution hereof.

13. Successors and Assigns

The provisions of this Agreement shall be binding upon and shall inure to the benefit of the respective Parties and their heirs, executors, administrators, agents, representatives, successors and assigns. The Parties hereto represent that they have the full authority to enter into this Agreement.

14. Notices

In the event any notice or demand is required to be made in connection with this Settlement Agreement, such notice or demand shall be by U.S. Mail and email as indicated below and shall be deemed to have been given either: (i) when mailed to the other Party via United States Mail, certified, return receipt requested (or any other reputable delivery service that is able to track and evidence transmittal and delivery); or (ii) when acknowledged that it was received via email. Notices shall be sent as follows:

<b>To the Company:</b>	<b>QS Energy, Inc.</b> _____ _____
<b>To Gregory M. Bigger:</b>	<b>Greggory M. Bigger</b> _____ _____

15. Headings and Construction

The headings in this Settlement Agreement are for convenience or reference only, and shall not be deemed to be a part hereof or to affect the meaning or interpretation of the provisions hereof. For purposes of construction, the Agreement shall be deemed to have been drafted by all Parties, and no ambiguity shall be resolved against any of the Parties by virtue of his, her or its participation in the drafting of the Agreement.

16. Counterparts

This Agreement may be executed in counterparts, and may be executed via facsimile transmission and/or by pdf forwarded by e-mail, and all signatures need not appear on the same signature page of the document.

17. Execution

Each of the Parties represents and warrants that each has read the Agreement in its entirety and has had the opportunity to review same with counsel. Each of the Parties further represents and warrants that he has full mental, physical, and legal capacity to enter into and execute this Agreement. Each person executing this Agreement represents and warrants that he has the right and power to enter into the Agreement on behalf of the Party for whom he is representing that he is executing.

18. Dispute Resolution/Enforcement of Agreement

In the event that any disagreement, dispute, or claim arises between the any of the Parties to this Agreement, which concerns this Agreement, its interpretation, or any of the rights, duties, and/or obligations of the Parties arising out of or related to this Agreement ("Dispute"), any and all such Disputes shall be resolved by arbitration and the Parties specifically agree that they are waiving the right to try any Dispute in a court of law. This waiver is a material inducement for the Parties to enter this Agreement. Any dispute under this Agreement shall be resolved by arbitration conducted in Los Angeles, CA in accordance with the rules of the American Arbitration Association ("AAA"). A single arbitrator (the "Arbitrator") shall be chosen by mutual agreement of the Parties. If the parties cannot agree upon the selection of the Arbitrator, then the arbitration shall be selected pursuant to the AAA Employment and Arbitration Rules. The arbitration shall be conducted in a single hearing and the Arbitrator shall render his/her decision within a reasonable time after the conclusion of the hearing. The decision of the arbitrator shall be final and nonappealable. Judgment upon any decision rendered by the arbitrator may be entered by any court having jurisdiction.

19. Return of Property/Network and System Access

To the extent that the Employee may not already have done so, he will immediately return all property belonging to the Company that he has in his possession, custody or control, including, but not limited to, electronic, computer or communications equipment, electronically stored information, keys, cards, documents, records or any other property. The Employee will not access any computer network or system of the Company, and the Employee will not delete, erase, or in any way impair the Company's ability to retrieve information from any electronic or communications equipment belonging to the Company.

20. General Provisions

(a) Each of the Parties understands this Agreement, and the terms and conditions contained herein, and has relied upon his or her own judgment, belief, knowledge, understanding and expertise after careful consultation with his own legal counsel concerning the legal effect of this Agreement and all of the terms and conditions of this Agreement, and enters the same voluntarily.

(b) This Agreement constitutes the entire, final and binding understanding between the Parties with respect to the subject matter hereof. No other statement or representation, written or oral, express or implied, has been relied upon in executing this Agreement, and all prior discussions, statements, and negotiations made or that have occurred prior to the date of the Agreement are deemed merged into this Agreement, and shall not be used for any purpose whatsoever.

(c) If all or any provision of the Agreement is held void, unlawful or for any reason unenforceable, the remaining portions of this Agreement will remain in full force and effect. The void, unlawful or unenforceable clause shall be deemed revised to the least extent possible to render it enforceable while maintaining the essential understanding and Agreement between the parties.

(d) This Agreement may not be amended, altered, modified or otherwise changed in any respect except by a writing duly executed by the Parties, or their authorized representatives.

(e) The Parties agree to execute any and all further documents that are necessary or required to carry out the terms or intent of the Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have executed this Agreement as of the Effective Date.

/s/ GREGGORY M. BIGGER  
Greggory M. Bigger

**QS ENERGY, INC.**

By: /s/ MICHAEL MCMULLEN  
Michael McMullen, CFO

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002  
AND RULES 13A-14 AND 15D-14 UNDER THE SECURITIES EXCHANGE ACT OF 1934**

I, Gregory Bigger, certify that:

1. I have reviewed this 10-K Report of QS Energy, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting) as defined in Exchange Act Rules 13a-15(f) and 15d-15(f) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2017

/s/ GREGGORY BIGGER

Greggory Bigger  
Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER  
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002  
AND RULES 13A-14 AND 15D-14 UNDER THE SECURITIES EXCHANGE ACT OF 1934**

I, Gregory Bigger, certify that:

1. I have reviewed this 10-K Report of QS Energy, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting) as defined in Exchange Act Rules 13a-15(f) and 15d-15(f) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2017

/s/ GREGGORY BIGGER

Greggory Bigger  
Chief Financial Officer

**CERTIFICATION OF PERIODIC FINANCIAL REPORT BY THE CHIEF EXECUTIVE  
OFFICER AND CHIEF FINANCIAL OFFICER  
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Solely for the purposes of complying with 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, we, the undersigned Acting Chief Executive Officer and the Chief Financial Officer of QS Energy, Inc. (the "Company"), hereby certify, based on our knowledge, that the Annual Report on Form 10-K of the Company for the year ended December 31, 2016 (the "Report") fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 31, 2017

/s/ GREGGORY BIGGER

Greggory Bigger  
Chief Executive Officer

Date: March 31, 2017

/s/ GREGGORY BIGGER

Greggory Bigger  
Chief Financial Officer