

ACORN ENERGY, INC.  
Form 10-K  
March 16, 2011

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

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FORM 10-K

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

For the fiscal year ended December 31, 2010

Commission file number: 0-19771

ACORN ENERGY, INC.  
(Exact name of registrant as specified in charter)

Delaware  
(State or other jurisdiction of incorporation or organization)

22-2786081  
(I.R.S. Employer Identification No.)

4 West Rockland Road, Montchanin, Delaware  
(Address of principal executive offices)

19710  
(Zip Code)

302-656-1707  
Registrant's telephone number, including area code

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Securities registered pursuant to Section 12(b) of the Act:

Title of Class	Name of Each Exchange on Which Registered
Common Stock, par value \$.01 per share	The NASDAQ Global Market

Securities registered pursuant to Section 12(g) of the Act:  
None

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 Exchange 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 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 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. (Check one):

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 Exchange Act). Yes  No

As of last day of the second fiscal quarter of 2010, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$76.4 million based on the closing sale price on that date as reported on the NASDAQ Global Market. As of March 9, 2011 there were 17,343,005 shares of Common Stock, \$0.01 par value per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

None.

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Certain statements contained in this report are forward-looking in nature. These statements can be identified by the use of forward-looking terminology such as “believes”, “expects”, “may”, “will”, “should” or “anticipates”, or the negative thereof, or comparable terminology, or by discussions of strategy. You are cautioned that our business and operations are subject to a variety of risks and uncertainties and, consequently, our actual results may materially differ from those projected by any forward-looking statements. Certain of such risks and uncertainties are discussed below under the heading “Item 1A. Risk Factors.”

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AquaShield™ and PointShield™ are trademarks of our DSIT Solutions Ltd. subsidiary. CoaLogix™ and MetalliFix™ are trademarks of our CoaLogix subsidiary. Line IQ™, Transformer IQ™, Bushing IQ™ and PowerMonic™ are trademarks of our GridSense subsidiary.

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PART I

ITEM 1.BUSINESS

OVERVIEW

Acorn Energy, Inc. (the Company”) is a holding company focused on technology driven solutions for energy infrastructure asset management. Our four businesses improve the world’s energy infrastructure by making it cleaner and less expensive to operate air pollution systems for coal and gas-fired power plants (CoaLogix), more secure by providing security solutions for underwater energy infrastructure (DSIT), more reliable by providing condition monitoring instruments for critical assets on the electric grid (GridSense) and more productive and efficient by increasing oil and gas production while lowering costs through use of ultra-high sensitive seismic tools for more precise pinpointing of oil and gas reservoirs (USSI).

Through our majority or wholly-owned operating subsidiaries we provide the following services and products:

- Air Pollution Control Services. We provide selective catalytic reduction (“SCR”) catalyst and management services for coal-fired power plants through our CoaLogix Inc. ("CoaLogix") subsidiary. These services include SCR catalyst management, cleaning and regeneration as well as consulting services to help power plant operators optimize efficiency and reduce overall nitrogen oxides (“NOx”) compliance costs through CoaLogix’s SCR-Tech LLC (“SCR-Tech”) subsidiary.
- Energy & Security Sonar Solutions (formerly known as Naval and RT Solutions). We provide sonar and acoustic related solutions for energy, defense and commercial markets with a focus on underwater site security for strategic energy installations and other real-time and embedded hardware and software development and production through our DSIT Solutions Ltd. ("DSIT") subsidiary.
- Smart Grid Distribution Automation. These products and services are provided by our GridSense subsidiary which develops markets and sells remote monitoring and control systems to electric utilities and industrial facilities worldwide.
- Energy and Security Sensor Systems. These products and services are provided by our US Sensor Systems Inc. subsidiary ("USSI") which develops and produces “state of the art” fiber optic sensing systems for the energy, commercial security and defense markets worldwide.

During 2010, each of the four abovementioned activities represented a reportable segment. In addition, our “Other” segment represents IT and consulting activities at our DSIT subsidiary.

## REVENUES BY COMPANY

The following table shows, for the periods indicated, the dollar amount (in thousands) of the consolidated revenues attributable to each of our consolidated companies. The revenues of USSI are included in our consolidated financial statements effective February 23, 2010. The revenues of GridSense are included in our consolidated financial statements effective May 12, 2010. Accordingly, there are no comparative revenues reported for these activities for 2009. On December 17, 2010, we discontinued our Coreworx activities. Accordingly, Coreworx' revenues and results are excluded for all periods indicated.

	Year ended December 31,		Three months ended December 31,	
	2009	2010	2009	2010
CoaLogix	\$ 18,099	\$ 21,450	\$ 5,338	\$ 6,638
DSIT Solutions	9,219	11,457	2,746	2,843
GridSense	—	2,382	—	1,194
USSI	—	405	—	212
Total	\$ 27,318	\$ 35,694	\$ 8,084	\$ 10,887

## AIR POLLUTION CONTROL SERVICES – COALOGIX

Through SCR-Tech, which is 100% owned by our 72% owned CoaLogix subsidiary, we offer a variety of services for coal-fired power plants that use SCR systems to reduce nitrogen oxides (“NOx”) emissions. NOx emissions are contributors to ground-level ozone (smog), particulate matter and acid rain. These services include SCR catalyst management, cleaning and regeneration, as well as consulting services to help power plant operators optimize efficiency and reduce overall NOx compliance costs.

Coal-fired power plants, in particular, continue to be a primary target for NOx reduction, and selective catalytic reduction remains the most widely used technology by plant operators to control NOx. With NOx removal efficiencies of up to 95%, SCR systems are considered to be the most effective NOx reduction solution, and we expect it to remain the dominant technology choice for coal-fired power plants to meet increasingly stringent U.S. air quality regulations.

The average useful life of SCR catalyst used at coal-fired power plants is approximately 24,000 hours (equivalent to three years of year-round operation). Until 2003, the only solution in the U.S. for restoring activity and NOx reduction performance was to replace spent catalyst with costly new catalyst. Since 2003, SCR-Tech has offered U.S. power plant operators a more cost-effective alternative in the form of catalyst regeneration.

## Regulatory Drivers

The 1990 Clean Air Act Amendments were implemented to improve air quality in the U.S., and are enforced by the U.S. Environmental Protection Agency (“EPA”). Under the Clean Air Act, the EPA limits how much of a pollutant can be in the air anywhere in the United States, with each state responsible for developing individual state implementation plans (“SIPs”) to meet the EPA’s set limits for various pollutants. Emissions of NOx from coal-fired power plants are included in the EPA’s criteria pollutants for which limits have been established. Operators of large power plants, particularly in the Eastern half of the U.S., have been required to significantly reduce their NOx emissions.

The original regulatory driver of SCR-Tech’s business was the EPA’s NOx SIP Call program which was designed to mitigate the regional transport of NOx and required energy producers and other industries operating large power plants in the Eastern half of the U.S. to reduce their NOx emissions substantially and to maintain them at reduced

levels particularly during the five-month “ozone season” (May 1-September 30) in 19 Midwestern and Eastern states and the District of Columbia. This program has resulted in a dramatic increase in the number of SCR system installations at coal-fired power plants for the removal of NOx.



The Clean Air Interstate Rule (“CAIR”) is another regulatory driver of our SCR service business. Phase I caps on NOx emissions took effect January 1, 2009, and are designed to permanently cap and achieve substantial reductions in emissions of NOx across 28 Eastern states and the District of Columbia that we believe will further increase the size of our addressable market. By 2015, CAIR is expected to significantly reduce NOx emissions in these states from 2003 levels by plants utilizing a cap-and-trade approach. This rule builds on the NOx SIP Call with the objective of further mitigating air pollution moving across state boundaries, and is designed to cut NOx emissions from power plants significantly with the 2009 Phase I caps and by the implementation of Phase II caps in 2015. CAIR’s Phase I caps require year-round SCR system operation for many power plants (with increased NOx reduction required during ozone season) to meet the more stringent requirements. With year-round operation of SCRs needed by many power plants to comply with CAIR, coal-fired power plant operators will be required to replenish the catalyst used in SCR systems with new or regenerated catalyst on a much more frequent basis.

On July 11, 2008, the D.C. Court of Appeals vacated CAIR and the associated Federal Implementation Plan. On December 23, 2008, the court subsequently re-instated CAIR to give the EPA an opportunity to fix flaws found by the court in its previous decision. The court did not provide a time limit for the EPA to complete the changes. The changes required by the court do not affect SCR usage or required emission caps or limits.

On July 6, 2010, the EPA issued the proposed replacement for CAIR, the “Transport Rules”. The public comment period ended in October, 2010 and the EPA is in the process of finalizing the proposed regulation. According to the EPA, by 2014, the Transport Rule will have the effect of reducing NOx from power plants by 52% over 2005 levels.

#### Market for SCR Catalyst and Management Services

Coal-fired plants represent approximately 50% of U.S. power generating capacity, and we believe they will continue to play an important role in the U.S. electricity generation market in the years ahead. Department of Energy (DOE) projections indicate that coal-fired electric power generation will grow gradually through 2035. The recent growth in SCR system installations in coal-fired power plants driven by the NOx SIP Call and CAIR has resulted in a large and growing U.S. market for SCR catalyst and management services. Based upon the substantial number of SCR systems that commenced operation between 2000 and 2006 combined with the CAIR Phase I caps which began on January 1, 2009, we expect the market for catalyst replenishment to increase dramatically, and result in a total addressable market for catalyst cleaning and regeneration estimated in excess of \$100 million in 2011.

By offering customers more economical ways to operate and maintain their SCR units, along with a lower cost regeneration alternative to purchasing new catalyst, we believe SCR-Tech has the potential to play a significant role in the growing U.S. market for SCR catalyst and management services.

## SCR-Tech's Service Offerings

### Catalyst Cleaning, Rejuvenation and Regeneration

We offer proprietary and patented processes that can improve the NO<sub>x</sub> removal efficiency and restore the useful life of installed SCR catalyst, providing a compelling economic alternative to catalyst replacement. SCR-Tech's processes are capable of not only physically cleaning and rejuvenating the most severely plugged, blinded or poisoned catalyst, but of also chemically reactivating deactivated catalyst. Depending upon the state of the installed catalyst, SCR-Tech offers several alternatives for restoring its NO<sub>x</sub> removal efficiency and extending its life. The chemicals and raw materials used in the cleaning and regeneration processes are commonly and readily available.

SCR-Tech's regeneration process has several advantages over purchasing new catalyst by (i) offering cost savings, (ii) eliminating or reducing environmental related disposal issues, (iii) enhancing catalyst activity and (iv) reducing sulfur dioxide conversion.

### SCR and Catalyst Management

We provide a broad array of customized SCR and catalyst management services, including guidance on effective SCR and catalyst management strategies, with the objective of assisting plant operators in optimizing the operation and performance of their SCR systems while reducing their operation and maintenance costs and achieving cost-effective NO<sub>x</sub> compliance. All SCR and catalyst management services are offered as either a complete package or "a la carte," allowing the flexibility to select and combine various services on an as-needed basis tailored to the individual SCR system.

### Customers

Our SCR catalyst and management services business currently primarily serves the U.S. coal-fired power generation market. Our customer base ranges from large investor-owned utilities and independent power producers to smaller municipal power generators. As part of an ongoing growth and revenue diversification strategy, SCR-Tech continues to actively target SCR operators at coal-fired power plants throughout the United States, and the Eastern U.S. in particular, to further expand its customer base and broaden its reach in the marketplace. In 2010, four customers represented approximately 54% of SCR-Tech's revenue (18%, 15%, 11%, and 10%), and one of those customers (the Tennessee Valley Authority) comprised approximately 11% (\$3.9 million) of Acorn's consolidated revenues for 2010. In 2009, two customers represented approximately 36% of SCR-Tech's revenue, with one of those customers, Allegheny Energy, comprising 16.0% of Acorn's sales for 2009. The loss of one or more of these customers could have a material effect on this segment.

### Competition

We are aware of one company, Evonik Energy Services LLC ("Evonik LLC"), which entered the U.S. catalyst regeneration market that offers competing SCR regeneration and cleaning services beginning in 2008, and has a regeneration facility in North Carolina. Evonik LLC, based in Charlotte, North Carolina, is a subsidiary of a large German company, Evonik Steag GmbH. We are currently involved in litigation with Evonik LLC. See Item 3. Legal Proceedings. Another company, Enerfab Inc. provides catalyst management, and also cleans and rejuvenates catalyst but does not regenerate catalyst (which involves reactivating catalyst with chemicals to restore the catalyst to its maximum efficiency). In addition, new catalyst replacement is the primary competition for SCR-Tech's regeneration process when a replenishment of catalyst activity is necessary. The basis of competition is often price as many projects are subject to competitive bidding. Quality and service can also be competitive factors.



## Production Facilities

SCR-Tech's business operations are located in Charlotte, North Carolina in two production facilities (Mount Holly and Steele Creek) with a total of approximately 270,000 square feet for the cleaning and regeneration of SCR catalyst.

In September 2009, SCR-Tech entered into an agreement to lease approximately 7.3 acres of land in Charlotte, North Carolina together with a building containing approximately 143,500 square feet of office, production and warehouse space (the Steele Creek facility). SCR-Tech entered into this lease to provide it with additional space for manufacturing, warehousing, research and development and administration. SCR-Tech leased 98,460 square feet through July 31, 2010 and added the remaining 45,040 square feet to the lease on August 1, 2010.

The Mount Holly facility is also located in Charlotte, North Carolina and contains approximately 126,000 square feet of leased office, production, laboratory and warehouse space. Since the opening of the Steele Creek facility, the Company continues to use the Mount Holly facility for production, laboratory and warehouse space. The Mount Holly facility's lease expires on June 30, 2012 and the company has two five years options to renew. CoaLogix is currently in the process of determining whether or not to exercise its option to extend the Mt. Holly lease. If CoaLogix does not exercise its option to extend the Mt. Holly lease, it is possible to increase production capacity at the Steele Creek facility to cover CoaLogix' near term production needs.

We believe that both production facilities (or an expanded Steele Creek facility if the Mt. Holly lease extension is not exercised) provide sufficient capacity for cleaning and regenerating SCR catalysts for the near future.

## Intellectual Property

We use a combination of patents, trade secrets, contracts, copyrights and trademarks to protect the proprietary aspects of our core technologies, technological advances and innovations, including our cleaning and regeneration processes and other know-how, and we work to actively maintain protection of our proprietary technologies and processes over time through follow-on patent filings associated with technology and process improvements that we continually develop. A significant portion of our know-how is protected as trade secrets and supported through contractual agreements with our employees, suppliers, partners and customers.

We either own (exclusively or jointly) or hold exclusive license rights from third parties for seven U.S. patents, three Canadian patents, one German patent and eight pending U.S. applications, three pending Chinese patents applications, one pending German application and one pending Canadian application. We anticipate that when our early patents expire, we will rely on subsequently filed and additional patents along with trade secrets and other know-how to protect the foundation technology and cleaning and regeneration processes. We plan to continue to file new patent applications as we gain knowledge and experience with our various processes and service offerings.

## ENERGY & SECURITY SONAR SOLUTIONS – DSIT SOLUTIONS LTD.

DSIT Solutions Ltd., which is 84% owned by Acorn, is a globally-oriented company based in Israel with expertise in sonar and acoustics and development capabilities in the areas of real-time and embedded systems. Based on these capabilities, we offer a full range of sonar and acoustic-related solutions to strategic energy installations as well as defense and homeland security markets. In addition, based on expertise in fields such as signal acquisition and processing applications, communication technologies, computerized vision for the semiconductor industry and command, control and communication management ("C3") we provide wide ranging solutions to both governmental and commercial customers.



## Products and Services

DSIT's Energy & Security Sonar Solutions activities are focused on two areas – sonar and acoustic solutions for naval and security markets and other real-time and embedded hardware and software development and production.

Energy & Security Sonar Solutions. Our energy & security sonar solutions include a full range of sonar and acoustic-related solutions to the strategic energy installation, defense and homeland security markets. These solutions include:

- AquaShield™ Diver Detection Sonar (“DDS”) – DSIT has developed an innovative, cost-effective DDS system, the AquaShield™, that provides critical coastal and offshore protection of sites through long-range detection, tracking, classification and warning of unauthorized divers and Swimmer Delivery Vehicles (“SDVs”) for rapid deployment and effective response. Our AquaShield™ DDS system is fully automatic and customizable, and requires intervention of a security person only for final decision and response to the threat. The DDS sensors can be integrated with other sensors into a comprehensive command and control (“C&C”) system to provide a complete tactical picture both above and below the water for more intelligent evaluation of and effective response to threats.
- PointShield™ Portable Diver Detection Sonar (PDDS) – DSIT has added another solution to its underwater family of "Shield" products – the PointShield™. The PointShield™ PDDS is a medium range portable diver detection sonar aimed at protecting vessels at anchorage and cover restricted areas such as water canals and intakes. The PointShield™ is a cost-effective system tailored to meet the needs of customers, whose main concern is portability and flexibility.
- PortView™ Harbor Surveillance System (“HSS”) – DSIT in cooperation with a partner company –HarTech Technologies, Ltd. has developed an integrated HSS that incorporates DDS sensors with above-water surveillance sensors to create a comprehensive above and below water security system to coastal and offshore sites such as energy terminals, offshore rigs, nuclear power plants and ports. The system reliably detects, tracks, and warns of intruders such as divers, swimmers, SDVs, semi-submersibles, small surface vessels and other potential intruders.
- Mobile Acoustic Range (“MAR”) – The MAR accurately measures a submarine’s or surface vessel’s radiated noise; thus enabling navies and shipyards to monitor and control the radiated noise and to silence their submarines and ships. By continuously tracking the measured vessel and transmitting the data to a measurement ship, the MAR system enables real time radiated noise processing, analysis and display. The system also includes a platform database for measurement results management and provides playback and post analysis capability.
- Generic Sonar Simulator (“GSS”) – DSIT has developed a GSS for the rapid and comprehensive training of Anti-Submarine Warfare (“ASW”), submarine, and mine detection sonar operators. This advanced, low cost, PC-based training simulator is designed for all levels of sonar operators from beginners to the most experienced, including ship ASW teams. The simulator includes all aspects of sonar operation, with emphasis on training in weak target detection in the presence of noise and reverberation, torpedo detection, audio listening and classification.
- Underwater Acoustic Signal Analysis system ("UASA") – DSIT's UASA system processes and analyzes all types of acoustic signals radiated by various sources and received by naval sonar systems (submarine, surface and air platforms, fixed bottom moored sonar systems, etc.).

### Other Real-Time and Embedded Solutions

Additional areas of development and production in real-time and embedded hardware and software include:

- Applications - DSIT specializes in Weapon/C&C Operating Consoles for unique air and naval applications, designed through synergistic interaction with the end-user. Weapon/C&C Consoles utilize Human-Machine Interface ("HMI") prototyping supported on a variety of platforms as an integral part of the HMI definition and refinement process. Weapon/C&C Console specific applications driven by HMI include signal processing and data fusion and tracking.
- Computerized Vision for the Semiconductor Industry - DSIT has been cooperating with global leaders of state-of-the-art semiconductor wafer inspection systems in developing cutting edge technologies to enable the semiconductor industry to detect defects in the manufacture of silicon wafers. DSIT develops and manufactures hardware and embedded software for computerized vision systems, and we supply this multi-disciplinary field in the integration of digital and analog technologies, image processing and intricate logic development.
- Modems, data links and telemetry systems – DSIT is working with major defense industries in Israel such as Rafael Advanced Defense Systems Ltd. and Israel Aerospace Industries Ltd., developing modems, advanced wideband datalinks and telemetry systems for airborne and missile systems. DSIT is providing development and production services of hardware and embedded signal processing software with high quality control standards.
- Sonar Building Blocks – based on our sonar capabilities and development of the DDS, DSIT has developed a number of generic building blocks of sonar systems such as Signal Processing Systems and Sonar Power Amplifiers (SPA). Some customers designing and building their own sonar systems have purchased these building blocks from us. These elements are specifically tailored and optimized for Sonar systems and have advantages over generic standard building blocks.

DSIT's other operations include IT and consulting activities whose results are not included in the Energy & Security Sonar Solutions segment.

### Customers and Markets

All of this segment's operations (excluding sales and product delivery, set-up and service) take place in Israel. In 2010, approximately 55% of this segment's revenues were derived from outside of Israel. In 2009, approximately 43% of the segment's revenues were derived from outside of Israel. While in 2008, only 15% of this segment's revenues were derived from outside of Israel. We expect this trend of increasing shares of this segment's revenues to be generated from outside of Israel to continue in 2011. DSIT continues to invest considerable effort to penetrate European, Asian, U.S. and other markets in order to broaden its geographic sales base with respect to its sonar technology solutions. We have significant customer relationships with some of Israel's largest companies in its defense and electronics industries as well as relationships with some of the biggest Asian defense integrators. We are currently exploring several cooperation opportunities within Europe and the US.

The global war on terror has shifted the focus of governments and Homeland Security agencies to invest in situational awareness equipment to better protect their national infrastructure. For example, in March 2009, the U.S. Nuclear Regulatory Commission ("NRC") amended the security requirements for nuclear power reactors to require detection and assessment systems at all licensed U.S. nuclear power plants. In addition, commercial enterprises are also increasingly aware of the need to protect critical coastal and waterfront infrastructures. These critical infrastructures include ports, oil terminals, off-shore oil and gas rigs, liquid natural gas ("LNG") plants and terminals, nuclear power plants, coal terminals, dams and canals. We believe there will be a growing demand by governmental agencies and

commercial owners of these facilities for products and services such as our energy and security sonar solutions described above.

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We believe that in 2011, we will see an increased flow of orders for our AquaShield DDS generated by customers realizing the potential threat to their coastal and offshore critical facilities. DSIT is currently in discussions with numerous potential energy, commercial and governmental customers who have shown interest in the company's underwater security systems.

Three customers accounted for approximately 68% of segment sales in 2010 (39%, 17% and 12%), one of which accounted for 11% (\$4.0 million) of Acorn's consolidated revenues for 2010. In 2009, three customers accounted for 83% (38%, 32% and 13%, respectively) of segment sales. The loss of any one or more of these customers could have a material adverse effect on this segment.

### Competition

Our Energy & Security Sonar Solutions segment faces competition from several competitors, large and small, operating in worldwide markets, (such as Sonardyne International Ltd. (based in the United Kingdom), Atlas Elektronik (based in Germany) and the Kongsberg group of companies (based in Norway)) with substantially greater financial and marketing resources, particularly with respect to our energy and security sonar solutions. We believe that our wide range of experience and long-term relationships with large businesses as well as the strategic partnerships that we are developing will enable us to compete successfully and obtain future business. In 2010, DSIT participated in a head-to-head in-the-water competition with its aforementioned primary competitors. DSIT's AquaShield DDS achieved a much better performance, than its competitors, particularly in the areas of detection range and automatic classification.

### Intellectual Property

DSIT rigorously attempts to protect its proprietary know-how, proprietary technologies, processes and other intellectual property.

DSIT's systems are heavily based on software implementing advanced acoustic signal processing algorithms. The foundation of the systems and DSIT's competitive edge lies in these algorithms. Our strategy is to identify these key intellectual property elements developed by us in order to protect them in a timely and effective manner, and to continually use such intellectual property to our competitive advantage in the marketplace.

We keep the detailed description of these core algorithms as proprietary information and accordingly they are not disclosed to the public or to customers. We use contractual measures such as non-disclosure agreements and special contract terms to protect this intellectual and proprietary information. It is uncommon for companies such as ours to rely on patents, as the patent itself may disclose critical information.

A significant portion of our know-how is protected as commercial secrets and supported through contractual agreements with our employees, suppliers, partners and customers.

### Facilities

DSIT's activities are conducted in approximately 18,000 square feet of office space in the Tel Aviv metropolitan area under a lease that expires in August 2012. We believe that DSIT's current premises are sufficient to handle the anticipated increase in sales for the near future.

## SMART GRID DISTRIBUTION AUTOMATION – GRIDSENSE

In accordance with applicable accounting standards, we began consolidating the results of GridSense beginning May 12, 2010, the date we acquired the outstanding GridSense shares not previously owned by us. Prior to that date we accounted for our GridSense investment using the equity method.

GridSense develops and markets remote monitoring systems to electric utilities and industrial facilities worldwide. These systems, used in a wide range of utility applications including outage management, power quality monitoring, system planning, trouble shooting and proactive maintenance, and condition monitoring, provide transmission and distribution network operators with the intelligence to better and more efficiently operate grid operations.

Due to increasing stresses on these systems, old and aging infrastructure and greater demands for power quality and reliability of supply, utilities are striving to modernize their electrical infrastructures with "SmartGrid" initiatives. Cost-effective and easily deployable, GridSense solutions provide critical components of the future grid.

GridSense's patented solutions allow end-users to cost effectively monitor the power quality and reliability parameters of electric transmission and distribution systems in applications where competitive offerings are non-existent or cost-prohibitive. GridSense has developed a range of offerings that addresses all the critical points of the electricity delivery system, including distribution and transmission lines, substations and transformers, and the point of electricity consumption.

GridSense operates from offices in the U.S. and Australia and has utility customers throughout the world, including the Americas, Asia, Australia, Africa, and the United Kingdom.

### GridSense Offerings & Solutions

GridSense has a range of commercially proven offerings sold to customers worldwide. The success of GridSense's offerings is based on being able to provide identifiable and quantifiable value to its utility customers by minimizing inconveniences and productivity losses for their consumers, optimizing operations of existing assets, reducing costs of identifying and rectifying outages and disturbances on their networks, and providing them with the requisite information to make better capital expenditure decisions. GridSense's offerings include:

- **PowerMonic™ Systems** - The PowerMonic™ range of outdoor power analyzers and analytical software allows electric utilities to monitor and investigate power quality problems in homes, offices, factories, and key points on the electricity distribution infrastructure.
- **Line IQ™ Systems** - The Line IQ™ provides real-time monitoring of electricity grids and captures important operational, maintenance, planning and regulatory reporting information such as current, temperature and power factor. The Line IQ™ provides all these applications at a fraction of the cost of alternative solutions in the market.
- **Transformer IQ™** – The Transformer IQ™ is a comprehensive monitoring system that consolidates all transformer monitoring functions onto a single platform using industry-proven hardware, and allows utilities to effectively predict nearly all the failure modes known to occur to transformers.
- **Bushing IQ™** – The Bushing IQ™ is a continuous online system for monitoring power factor in high voltage capacitive bushings.



## Customers and Markets

Within Australia where GridSense has an established sales team and support infrastructure, GridSense sells the PowerMonic™, Line IQ™, Transformer IQ™ and Bushing IQ™ range of products directly to electric utilities and industrial customers. Outside of Australia, GridSense utilizes a network of resellers, including rental companies, electrical engineering firms, distributors, independent manufacturers' representatives and agents. In addition, in North America, GridSense employs five sales professionals. By leveraging off this indirect sales network, GridSense has expanded into international territories while minimizing the risk and financial burden of maintaining a direct sales organization.

Strategically important markets outside of Australia include North America, UK and South Africa. Having invested heavily in an organization to support its customers in the US and Canada, GridSense has grown its customer base from just a handful a few years ago to over 200 utility companies ranging from municipal utilities and cooperatives to large investor owned utilities. The penetration of this market in the relatively short time since GridSense established operations in the US has been made possible with the establishment of a manufacturers' rep network covering the region. Given the size of the North American utility market, sales from this territory are expected to grow, and we believe North America will eventually represent the largest portion of overall company sales in the future. Unlike North America which is characterized by a large number of electricity suppliers over a vast geographic territory, the opportunities in the United Kingdom and South Africa are focused on a small number of large electric utility operators. The company is currently pursuing deployment opportunities in both the United Kingdom and South Africa.

GridSense has activities in other international markets but continues a measured and disciplined approach toward expansion. Validation of the market opportunity takes place before actual deployment of resources. GridSense mitigates its operational and financial risks by aligning itself with resellers that exhibit technical competency, established customer relationships and on-the-ground resources to support our offerings.

Two customers accounted for approximately 27% of GridSense's sales (14% and 13%) during the period following our consolidation of GridSense in May 2010. The loss of one or more of these customers could have a material effect on this segment.

## Production Facilities and Locations

GridSense is headquartered in Sydney, Australia in an 8,100 square foot leased facility and has a 5,500 square foot leased facility in Sacramento, California, both of which GridSense management deems sufficient to meet its needs for the foreseeable future. GridSense has successfully outsourced many production aspects to external parties. The transfer of production to accredited contract manufacturers has reduced the Company's fixed manufacturing overhead and freed up resources to focus on quality assurance and service.

## Competition

The industry in which GridSense operates is characterized by intense competition from both large, established companies as well as smaller companies with specialized offerings. Such competitors include General Electric, Siemens, Qualitrol Company LLC, PowerSense and Schweitzer Engineering Laboratories. To avoid direct competition with larger, more established companies GridSense focuses on niches where it can offer a differentiated product based on superior cost and performance. As GridSense grows and penetrates markets where larger companies have been established, it may experience more competition. GridSense is in a field where electronics and software/firmware dominate. This fast changing area may generate new methods of detecting and monitoring disturbances. GridSense closely monitors trends and changes in technologies and customer demand that could adversely impact its competitiveness and overall success. Price, quality and experience are the primary competitive factors.

## Intellectual Property

GridSense invests significant resources in product development and research in order to maintain its competitiveness in the marketplace. Keeping proprietary information safe from unauthorized use or disclosure is therefore an important objective. In order to protect its proprietary know-how and technology, GridSense uses a combination of patents, trade secrets, contracts, copyrights and trademarks. GridSense owns three Australian patents and three U.S. patents, and has one patent pending in both Australia and the U.S. In addition, GridSense owns three patents in Canada, two in Europe, two in South Africa and one in Great Britain. However, some of GridSense's know-how and technology may not be patentable. To protect its rights, GridSense requires employees, consultants, advisors and collaborators to enter into confidentiality agreements. While these agreements will provide some level of protection, they cannot provide absolute assurance that GridSense's trade secrets, know-how or other proprietary information are fully safeguarded. Whenever intellectual property is developed internally or acquired, GridSense will evaluate and determine the optimal mix of controls to protect itself.

## ENERGY AND SECURITY SENSOR SYSTEMS - U.S. SENSOR SYSTEMS INC.

In accordance with applicable accounting standards, we began consolidating the results of US Sensor Systems Inc. ("USSI") beginning February 23, 2010, the date we effectively acquired USSI. USSI is a Delaware corporation based in Northridge, California which was established in October 2007. In a series of investments, option exercises and exchanges of shares beginning in November 2009 through our most recent exercise in February 2011, we have acquired an aggregate of approximately 81% of USSI. In addition, we hold an additional option that can increase our holdings to approximately 87% by May 2011.

USSI's primary focus is to develop and produce "state of the art" fiber optic sensing systems for the energy and security (both commercial and defense) markets. USSI's patented ultra-high sensitivity fiber optic sensors are being designed to replace the legacy expensive, unreliable, and bulky electronic sensors currently in widespread use today with small, low cost, ultra-reliable, and inherently-safe fiber optic sensors. USSI's fiber optic sensors have demonstrated greater than three hundred times the sensitivity as compared to the legacy electronic sensors and sell for a fraction of the cost of traditional electronic sensors.

USSI's new fiber optic sensing systems provide its users with a competitive advantage over those relying on existing sensor technology. As further described below, primary product lines for which USSI is currently developing products include downhole fiber optic sensor systems for oilfield 4D seismic reservoir monitoring, shale gas microseismic monitoring, fiber optic perimeter security systems (including commercial and defense), and fiber optic pipeline/coal mine monitoring systems. USSI's systems are currently being installed for evaluation by companies in North America, Asia, and Eastern Europe.



## Products and Services

4D reservoir & shale gas monitoring. New oil discoveries are not keeping pace with the worldwide demand for oil. To make up for this shortfall, more oil must be produced from existing fields, which dictates increased use of 4D seismic techniques (repeated 3D seismic images to monitor the movement of oil reservoir fluids over time) to increase the percentage of oil extracted. For 4D to be cost-effective, permanently-installed seismic sensors are needed. Current mainstream oilfield seismic sensing systems are based upon 50 year-old technology that is costly and unreliable for permanent installations. USSI's fiber optic seismic sensors can meet the demanding performance, cost, and reliability requirements needed for advanced 4D seismic analysis.

In addition to oilfield seismic sensing, there is also a great need for the USSI technology in the harvesting of natural gas. There is a fundamental shift underway within the oil and gas industry as major oil companies are increasingly focusing on natural gas as new horizontal drilling techniques combined with hydro fracking are making the world's vast tight gas shale fields economical to produce. Natural gas burns cleaner than oil and is also gaining traction as a fuel for transportation. USSI's fiber optic sensors can provide the ability to monitor the fracking process to improve production efficiency and minimize potential environmental damage at a fraction of the cost of competing technology.

Fiber optic pipeline monitoring. There are currently approximately 134,000 miles of oil pipelines and 387,000 miles of gas pipelines in the US, most of which were built before the end of World War II. USSI provides pipeline monitoring for Oil and Gas pipelines, through a similar revolutionary, all-in-one, fiber optic sensing cable. Since the optical fiber is the sensor, there are no electronics required in the sensor cable, and every inch of the cable is acoustically sensitive ensuring that there are no gaps in coverage. The USSI system detects unusual acoustic activity such as leaks, tampering, theft or damage caused by construction equipment. The USSI system can effectively detect attempted illegal tapping of pipelines in remote areas as well as intrusion into pipeline facilities for terrorist activities. The unique ability of USSI's sensor to monitor hundreds of miles of pipeline in real-time, with no electronics on the pipeline is a distinct advantage over competing systems.

Fiber optic perimeter security. USSI has developed an all-optical security system based upon a microphonic cable that can be mounted on a fence, buried along a border/perimeter, or placed underwater in a harbor. We believe the USSI fiber optic microphonic cable is the most sensitive available as it can detect disturbance signals that are 100 times quieter than competing systems. In addition, the USSI system is unique in its ability to detect and classify multiple simultaneous events. The system utilizes sophisticated signal processing techniques to screen out false alarms, and will detect, pinpoint, and notify on any attempts to infiltrate a facility.

The USSI security sensing system features low noise, high sensitivity, high dynamic range, providing a true reproduction of acoustic signals, and clearly defined, independent sensing zones. We believe the USSI buried fiber optic sensing system has the lowest noise floor of any competing fiber optic perimeter security system. This advantage enables the USSI system to detect in-ground disturbance signals that may be very weak or that occur at much larger distances. In addition, the USSI system is unique in its ability to detect and classify multiple simultaneous events on single or multiple zones. This capability is very important in that it prevents a potential intruder from foiling the system by masking an intrusion attempt by simultaneously applying loud noise at an alternate location.

## Customers and Markets

In the period since our acquisition of USSI, it has recorded revenues of approximately \$0.4 million. However, USSI has initiated numerous project proposals for all of its products and services as well as successfully demonstrated its sensor technology at numerous test sites for potential customers.





Energy. USSI targets its products into the oilfield geophysics market, which has about a \$12 billion annual market size, of which about \$10 billion is for seismic acquisition and processing activities, and about \$2 billion is for equipment such as seismic sources and sensors. USSI's sensor systems fall into the oilfield geophysical equipment market, and its potential customers are the oilfield service companies. The leading oilfield service companies are Schlumberger, Halliburton, and Baker Hughes.

Three companies account for 90% of the Oilfield Geophysical Equipment market. Sercel, S.A, a subsidiary of Compagnie Generale de Geophysique-Veritas (CGGVeritas) represents 54% of the market, ION Geophysical Corporation represents 28% and Oyo Geospace Corporation represents about 8%. The majority of this equipment is currently used for marine seismic and land (surface) seismic applications, with downhole seismic and microseismic making up only about 10%. USSI is initially pursuing the downhole seismic and microseismic market as these are the least mature but the fastest growing market. USSI believes the size of this market to be in excess of \$150 million in 2011. After addressing these markets, USSI plans to pursue the larger, more mature marine and land seismic markets.

Security. As a result of the attacks of September 11, the United States and many of its international partners have embarked on a massive, long-term effort to enhance the security of their homelands. Waging a cost effective campaign to enhance homeland security demands new, highly developed technologies. USSI's all fiber optic security systems are an example of one of those technologies. For these applications, what is needed is an unobtrusive sensor system that will allow military forces and/or border security personnel to monitor long stretches of territory from protected sites at extended standoff ranges.

According to Homeland Security Research Corporation, a consulting firm, the U.S. market for homeland security products and services was approximately \$23.8 billion in 2006, and barring any future attacks, that figure is expected to increase by roughly 50 percent by 2011.

USSI's potential customers are the large and small commercial security system integrators, government organizations such as the U.S. Department of Homeland Security, and large government contractors such as Boeing, Northrop Grumman, Lockheed Martin, and Raytheon as well as leading commercial system integrators such as ADT Ltd. (a subsidiary of Tyco International Ltd.), Protection One, Inc., and Monitronics, International, Inc.

#### Competition

Oil & Gas. USSI's primary competition comes from oilfield equipment providers using conventional retrievable downhole sensor technology. This technology is well-proven and widely used. The leaders include OYO Geospace Corporation, Sercel S.A., and ION Geophysical Corporation. Our target market is the emerging permanent downhole sensor market. The existing conventional technology is not suited for permanent installations for the following reasons:

- Cost - downhole sensor arrays using existing technology cost \$4M to \$6M per copy. The equivalent USSI downhole system sells for a fraction of that price.
- Reliability - existing technology requires expensive downhole electronics that cannot be serviced or repaired if permanently installed. The USSI system has no downhole electronics.

USSI also has competition from other oilfield fiber optic sensor companies such as Stingray Geophysical Ltd. (Stingray), Weatherford International Ltd., and Petroleum Geo-Services ASA (PGS). Stingray and PGS use early generation fiber optic sensor technology which is expensive and difficult to manufacture. The Weatherford sensor technology is also expensive and its highest reported performance is significantly less than published USSI performance. The USSI sensor technology is protected via multiple patents/patent applications.



Security Systems. USSI's competition in the security market comes from well established companies utilizing conventional (leaky-coax cable) technology and relatively new companies utilizing fiber optic technology. Both technologies can be mounted to a fence or buried around a perimeter. The leading competitors using conventional technology are Southwest Microwave Inc., and Magal Security Systems, Ltd. The leading fiber optic competitors are Future Fibre Technologies Pty Ltd., FiberSensys Inc., Sensoptics Ltd., and Senstar Corporation.

Existing conventional technology, which has been installed in tens of thousands of locations, has multiple drawbacks. These drawbacks include susceptibility to electromagnetic interference (EMI), radio frequency interference (RFI) and lightning. The traditional geophones that are part of existing conventional technology consist of a moving coil of wires around a stationary magnet. If an outside magnetic field is introduced (EMI), it will interfere with the geophone's performance. If a radio (or cell phone, or other wireless device) is transmitting near a system (RFI) that contains existing conventional technology, it could interfere with the system's performance as well. Furthermore, it is expensive to install and maintain the existing conventional technology, requiring multiple electronics boxes and unreliable batteries in the field. These aforementioned problems with existing conventional technology led to the emergence of fiber optic-based security systems. The problems with the competing fiber optic security systems include an inability to detect multiple simultaneous events, low sensitivity (10 to 100 times less sensitive than USSI technology), and low signal fidelity (making it difficult to distinguish false alarms).

The USSI approach features low noise, high sensitivity, high dynamic range, providing a true reproduction of acoustic signals, and clearly defined, independent sensing zones. We believe the USSI buried fiber optic sensing system has the lowest noise floor of any competing fiber optic perimeter security system. This advantage enables the USSI system to detect in-ground disturbance signals that may be very weak or that occur at much larger distances. In addition, the USSI system is unique in its ability to detect and classify multiple simultaneous events on single or multiple zones. This capability is very important in that it prevents a potential intruder from foiling the system by masking an intrusion attempt by simultaneously applying loud noise at an alternate location.

#### Intellectual Property

USSI invests significant resources in product development and research in order to protect its future competitiveness in the marketplace. Keeping proprietary information safe from unauthorized use or disclosure is therefore an important objective. In order to protect its proprietary know-how and technology, USSI uses a combination of patents, trade secrets, contracts, and trademarks. However, some of USSI's know-how and technology may not be patentable. To protect its rights, USSI requires employees, consultants, advisors and collaborators to enter into confidentiality agreements. While these agreements will provide some level of protection, they cannot provide absolute assurance that USSI's trade secrets, know-how or other proprietary information are fully safeguarded. Whenever intellectual property is developed internally or acquired, USSI will evaluate and determine the optimal mix of controls to protect itself. USSI owns one U.S. patent, seven applications pending in the U.S. (two non-provisional and five provisional) and three patent applications pending internationally. USSI also has five provisional applications currently active in the US.

#### Facilities

USSI's activities are conducted in approximately 4,400 square feet of office and production space in the San Fernando Valley (a suburb north of Los Angeles, CA) under a lease that expires in April 2011. We believe that USSI's current premises will not be sufficient to handle the anticipated increase in sales for the near future and that USSI will have to increase their office and production space when their lease expires in 2011. USSI is currently exploring options for expanded facilities in the San Fernando Valley.



## BACKLOG

As of December 31, 2010, our backlog of work to be completed and the amounts expected to be completed in 2011 were as follows (amounts in millions of U.S. dollars):

	Backlog at December 31, 2010	Amount expected to be completed in 2011
CoaLogix	\$ 7.6	\$ 6.7
DSIT Solutions	6.4	5.0
GridSense	0.4	0.4
USSI	0.5	0.5
Total	\$ 14.9	\$ 12.6

## RESEARCH AND DEVELOPMENT EXPENSE

Research and development expense recorded for the years ended December 31, 2009 and 2010 for each of our consolidated subsidiaries is as follows (amounts in thousands of U.S. dollars):

	Years ended December 31,	
	2009	2010
CoaLogix	\$ 86	\$ 166
DSIT Solutions	457	323
GridSense	—	259 *
USSI	—	383 **
Total	\$ 543	\$ 1,131

\* GridSense was acquired on May 12, 2010. Accordingly, the research and development expense recorded with respect to GridSense relates only to the period after its acquisition.

\*\* USSI was effectively acquired on February 23, 2010. Accordingly, the research and development expense recorded with respect to USSI relates only to the period after its acquisition.

## EMPLOYEES

At December 31, 2010, we employed a total of 228 employees, including 178 full-time employees. We consider our relationship with our employees to be satisfactory.

A breakdown of our full-time employees by geographic location can be seen below:

	Employee count at December 31, 2010			Total
	U.S	Australia	Israel	
CoaLogix	79	—	—	79
DSIT Solutions	—	—	55	55
GridSense	14	21	—	35

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USSI	7	—	—	7
Acorn	2	—	—	2
Total	102	21	55	178

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A breakdown of our full-time employees by activity can be seen below:

	Employee count at December 31, 2010			Total
	Production, Engineering and Technical Support	Marketing and Sales	Management, Administrative and Finance	
CoaLogix	66	2	11	79
DSIT Solutions	45	1	9	55
GridSense	20	6	9	35
USSI	5	1	1	7
Acorn	—	—	2	2
Total	136	10	32	178

We have no collective bargaining agreements with any of our employees. However, with regard to our Israeli activities, certain provisions of the collective bargaining agreements between the Israeli Histadrut (General Federation of Labor in Israel) and the Israeli Coordination Bureau of Economic Organizations (including the Industrialists Association) are applicable by order of the Israeli Ministry of Labor. These provisions mainly concern the length of the workday, contributions to a pension fund, insurance for work-related accidents, procedures for dismissing employees, determination of severance pay and other conditions of employment. We generally provide our Israeli employees with benefits and working conditions beyond the required minimums. Israeli law generally requires severance pay upon the retirement or death of an employee or termination of employment without due cause. Furthermore, Israeli employees and employers are required to pay specified amounts to the National Insurance Institute, which administers Israel's social security programs. The payments to the National Insurance Institute include health tax and are approximately 5.5% of wages (up to a specified amount), of which the employee contributes approximately 70% and the employer approximately 30%.

In Australia, all employers are required to make contributions to retirement investment funds benefiting employees called Superannuation. GridSense is required to pay 9% of salary as a contribution toward Superannuation funds nominated by its employees. Further, the Australian Government stipulates that employees are entitled to severance pay if their position is terminated as a result of company restructuring.

#### ADDITIONAL FINANCIAL INFORMATION

For additional financial information regarding our operating segments, foreign and domestic operations and sales, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and Note 22 to our Consolidated Financial Statements included in this Annual Report.

#### ITEM 1A.RISK FACTORS

We may from time to time make written or oral statements that contain forward-looking information. However, our actual results may differ materially from our expectations, statements or projections. The following risks and uncertainties could cause actual results to differ from our expectations, statements or projections.

## GENERAL FACTORS

The ongoing crisis in global credit and financial markets could materially and adversely affect our business and results of operations.

The ongoing global financial crisis may limit our ability to access the capital markets at a time when we would like, or need, to raise capital, which could have an impact on our ability to react to changing economic and business conditions. Accordingly, if the global financial crisis and current economic downturn continue or worsen, our business, results of operations and financial condition could be materially and adversely affected.

We have a history of operating losses and have used increasing amounts of cash for operations and to fund our acquisitions and investments.

We have a history of operating losses, and have used significant amounts of cash to fund our operating activities over the years. In 2009 and 2010, we had operating losses of \$5.0 million and \$6.8 million, respectively. Cash used in continuing operations in 2009 and 2010 was \$3.2 million and \$6.4 million, respectively.

In addition, we continue to pursue additional acquisitions and investment opportunities and may need to support the financing needs of our subsidiaries. Following our recent capital raise, we currently have enough cash on hand to fund our operations for the next 12 months. However, we may need additional funds to finance future investment and acquisition activity we wish to undertake. We do not know if such funds will be available if needed on terms that we consider acceptable. We may have to limit or adjust our investment/acquisition strategy or sell some of our assets in order to continue to pursue our corporate goals.

We depend on key management for the success of our business.

Our success is largely dependent on the skills, experience and efforts of our senior management team and other key personnel. In particular, our success depends on the continued efforts of John A. Moore, our CEO, William J. McMahon, CEO of CoaLogix/SCR-Tech, Benny Sela, CEO of DSIT, Lindon Shiao, CEO of GridSense and Jim Andersen, CEO of USSI and other key management level employees. The loss of the services of any of these key employees could materially harm our business, financial condition, future results and cash flow. We do not maintain "key person" life insurance policies on any of our employees other than for our CEO, John A. Moore. Although to date we have been successful in retaining the services of senior management and have entered into employment agreements with them, members of our senior management may terminate their employment agreements without cause and with various notice periods. We may also not be able to locate or employ on acceptable terms qualified replacements for our senior management or key employees if their services were no longer available.

Loss of the services of a few key employees could harm our operations.

We depend on key technical employees and sales personnel. The loss of certain personnel could diminish our ability to develop and maintain relationships with customers and potential customers. The loss of certain technical personnel could harm our ability to meet development and implementation schedules. The loss of key sales personnel could have a negative effect on sales to certain current customers. Most of our significant employees are bound by confidentiality and non-competition agreements. Our future success also depends on our continuing ability to identify, hire, train and retain other highly qualified technical and managerial personnel. If we fail to attract or retain highly qualified technical and managerial personnel in the future, our business could be disrupted.





Our awards of stock options to employees may not have their intended effect.

A portion of our total compensation program for our executive officers and key personnel has historically included the award of options to buy our common shares or the common stock of our subsidiaries. If the price of our common stock performs poorly, such performance may adversely affect our ability to retain or attract critical personnel. In addition, any changes made to our stock option policies, or to any other of our compensation practices, which are made necessary by governmental regulations or competitive pressures could affect our ability to retain and motivate existing personnel and recruit new personnel.

Compliance with changing regulation of corporate governance, public disclosure and financial accounting standards may result in additional expenses and affect our reported results of operations.

Keeping informed of, and in compliance with, changing laws, regulations and standards relating to corporate governance, public disclosure and accounting standards, including the Sarbanes-Oxley Act, Dodd-Frank Act, as well as new and proposed SEC regulations and accounting standards, has required an increased amount of management attention and external resources. Compliance with such requirements may result in increased general and administrative expenses and an increased allocation of management time and attention to compliance activities.

We may not be able to successfully integrate companies which we may invest in or acquire in the future, which could materially and adversely affect our business, financial condition, future results and cash flow.

We effectively acquired USSI in February 2010, and we closed on our acquisition of GridSense in May 2010. Any failure to effectively integrate USSI's or GridSense's management into our controls, systems and procedures could materially adversely affect our business, results of operations and financial condition.

Our strategy is to continue to integrate our newly acquired companies and grow the businesses of all of our companies. Integrating acquisitions is often costly, and we may not be able to successfully integrate our acquired companies with our existing operations without substantial costs, delays or other adverse operational or financial consequences. Integrating our acquired companies involves a number of risks that could materially and adversely affect our business, including:

- failure of the acquired companies to achieve the results we expect;
- inability to retain key personnel of the acquired companies;
- dilution of existing stockholders;
- potential disruption of our ongoing business activities and distraction of our management;
- difficulties in retaining business relationships with suppliers and customers of the acquired companies;
- difficulties in coordinating and integrating overall business strategies, sales and marketing, and research and development efforts; and
- the difficulty of establishing and maintaining uniform standards, controls, procedures and policies, including accounting controls and procedures.

If any of our acquired companies suffers customer dissatisfaction or performance problems, the same could adversely affect the reputation of our group of companies and could materially and adversely affect our business, financial

condition, future results and cash flow.

In order to grow, one or more of our companies may decide to pursue growth through acquisitions. Any significant acquisition by one or more of our operating companies could require substantial use of our capital and may require significant debt or equity financing. We cannot provide any assurance as to the availability or terms of any such financing or its effect on our liquidity and capital resources.

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We incur substantial costs as a result of being a public company.

As a public company, we incur significant legal, accounting, and other expenses in connection with our reporting requirements. The Sarbanes-Oxley Act of 2002, Dodd-Frank Act and the rules subsequently implemented by the Securities and Exchange Commission ("SEC") and NASDAQ, have required changes in corporate governance practices of public companies. These rules and regulations have already increased our legal and financial compliance costs and the amount of time and effort we devote to compliance activities. We expect that as a result of continued compliance to these rules and regulations, we will continue to incur significant legal and financial compliance costs. We continue to regularly monitor and evaluate developments with respect to these new rules with our legal counsel, but we cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

We are currently involved in litigation and may in the future become involved in litigation that may materially adversely affect us.

We are currently parties to litigation matters which are described under "Item 3. Legal Proceedings." Also, from time to time in the ordinary course of our business, we may become involved in various legal proceedings, including commercial, product liability, employment, class action and other litigation and claims, as well as governmental and other regulatory investigations and proceedings. Such matters can be time-consuming, divert management's attention and resources and cause us to incur significant expenses. Furthermore, because litigation is inherently unpredictable, the results of any such actions may have a material adverse effect on our business, operations or financial condition.

Goodwill recorded in connection with our acquisitions is subject to mandatory annual impairment evaluations and as a result, we could be required to write off some or all of this goodwill, which may adversely affect our financial condition and results of operations.

In accordance with applicable accounting principles, goodwill is not amortized but is reviewed annually or more frequently for impairment and other intangibles are also reviewed if certain conditions exist. During the year ended December 31, 2010, we recorded a \$5.0 million impairment of goodwill associated with our former Coreworx subsidiary following our decision to stop funding the company and an impairment of \$1.2 million associated with our GridSense segment. Any additional impairment of the value of goodwill will result in an additional charge against earnings which could materially adversely affect our reported results of operations and financial position in future periods.

While we have not reported any material weaknesses in internal controls over financial reporting in the past, we cannot assure you that material weaknesses will not be identified in the future. If our internal control over financial reporting or disclosure controls and procedures are not effective, there may be errors in our financial statements that could require a restatement or our filings may not be timely and investors may lose confidence in our reported financial information.

Section 404 of the Sarbanes-Oxley Act of 2002 requires us to evaluate the effectiveness of our internal control over financial reporting as of the end of each year, and to include a management report assessing the effectiveness of our internal control over financial reporting in each Annual Report on Form 10-K.

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. Over time, controls may become inadequate because changes in conditions or deterioration in the degree of compliance with policies or procedures may occur. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

As a result, we cannot assure you that significant deficiencies or material weaknesses in our internal control over financial reporting will not be identified in the future. Any failure to maintain or implement required new or improved controls, or any difficulties we encounter in their implementation, could result in significant deficiencies or material weaknesses, cause us to fail to timely meet our periodic reporting obligations, or result in material misstatements in our financial statements. Any such failure could also adversely affect the results of periodic management evaluations regarding disclosure controls and the effectiveness of our internal control over financial reporting required under Section 404 of the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder. The existence of a material weakness could result in errors in our financial statements that could result in a restatement of financial statements, cause us to fail to timely meet our reporting obligations and cause investors to lose confidence in our reported financial information.

If we are unable to protect our intellectual property, or our intellectual property protection efforts are unsuccessful, others may duplicate our technology.

Our operating companies rely on a combination of patents, trademarks, copyrights, trade secret laws and restrictions on disclosure to protect our intellectual property rights. Our ability to compete effectively will depend, in part, on our ability to protect our proprietary technology, systems designs and manufacturing processes. The ability of others to use our intellectual property could allow them to duplicate the benefits of our products and reduce our competitive advantage. We do not know whether any of our pending patent applications will be issued or, in the case of patents issued, that the claims allowed are or will be sufficiently broad to protect our technology or processes. Further, a patent issued covering one use of our technology may not be broad enough to cover uses of that technology in other business areas. Even if all our patent applications are issued and are sufficiently broad, they may be challenged or invalidated or our competitors may independently develop or patent technologies or processes that are equivalent or superior to ours. We could incur substantial costs in prosecuting patent and other intellectual property infringement suits and defending the validity of our patents and other intellectual property. While we have attempted to safeguard and maintain our property rights, we do not know whether we have been or will be completely successful in doing so. These actions could place our patents, trademarks and other intellectual property rights at risk and could result in the loss of patent, trademark or other intellectual property rights protection for the products, systems and services on which our business strategy partly depends.

We rely, to a significant degree, on contractual provisions to protect our trade secrets and proprietary knowledge. These trade secrets cannot be protected by patent protection. These agreements may be breached, and we may not have adequate remedies for any breach. Our trade secrets may also be known without breach of such agreements or may be independently developed by competitors.

Third parties may claim that we are infringing their intellectual property, and we could suffer significant litigation or licensing expenses or be prevented from selling products and services if these claims are successful. We also may incur significant expenses in affirmatively protecting our intellectual property rights.



In recent years, there has been significant litigation involving patents and other intellectual property rights in many technology-related industries and we believe that the industries that certain of our subsidiaries operate have a significant amount of patent activity. Third parties may claim that the technology or intellectual property that we incorporate into or use to develop, manufacture or provide our current and future products, systems or services infringe, induce or contribute to the infringement of their intellectual property rights, and we may be found to infringe, induce or contribute to the infringement of those intellectual property rights and may be required to obtain a license to use those rights. We may also be required to engage in costly efforts to design our products, systems and services around the intellectual property rights of others. The intellectual property rights of others may cover some of our technology, products, systems and services. In addition, the scope and validity of any particular third party patent may be subject to significant uncertainty.

Litigation regarding patents or other intellectual property rights is costly and time consuming, and could divert the attention of our management and key personnel from our business operations. The complexity of the technology involved and the uncertainty of intellectual property litigation increase these risks. Claims of intellectual property infringement might also require us to enter into costly royalty or license agreements or to indemnify our customers. However, we may not be able to obtain royalty or license agreements on terms acceptable to us or at all. Any inability on our part to obtain needed licenses could delay or prevent the development, manufacture and sale of our products, systems or services. We may also be subject to significant damages or injunctions against development, manufacture and sale of our products, systems or services.

We also may be required to incur significant time and expense in pursuing claims against companies we believe are infringing or have misappropriated our intellectual property rights. We are currently pursuing one such claim as described under “Item 3 – Legal Proceedings” and may find it necessary to commence such litigation in the future to protect our rights and future business opportunities. We can offer no assurance as to the outcome of any such litigation.

#### Concentrations of credit risk

Financial instruments, which potentially subject us to concentrations of credit risk, consist principally of cash and cash equivalents and trade receivables. The counterparty to a significant amount of our cash equivalents and restricted cash deposits is a money market of a major financial institution. We do not believe there is significant risk of non-performance by this counterparty. Approximately 43% of the trade accounts receivable at December 31, 2010 was due from three customers that pay their trade receivables over usual credit periods. Credit risk with respect to the balance of trade receivables is generally diversified due to the number of entities comprising our customer base.

#### RISKS RELATED TO COALOGIX

CoaLogix has incurred losses since inception and may never achieve sustained profitability.

CoaLogix has incurred net losses of \$0.3 million and \$2.7 million for the years ended December 31, 2010 and 2009, respectively. We believe that CoaLogix’ 2011 operating results will improve compared to the results as seen in 2010. However, we can provide no assurance that CoaLogix will generate sufficient revenues to allow it to become profitable or to sustain profitability.

The market for CoaLogix’ business is in the early formative stage.

Through its subsidiary, SCR-Tech LLC, CoaLogix offers SCR catalyst cleaning, rejuvenation and regeneration, as well as SCR system management and consulting services. The size and growth rate for this market will ultimately be determined by a number of factors, including environmental regulations, the growth in the use of SCR systems to

reduce NOx and other pollutants, the length of operation of SCR systems, the adoption of regeneration versus replacement, the expansion of warranty coverage from SCR catalyst OEMs, the cost of new SCR catalyst, and other factors, most of which are beyond the control of CoaLogix. There is limited historical evidence in the United States as to the cycle of replacement, cleaning and regeneration of SCR catalyst so as to accurately estimate the potential growth of the business. In addition, the number of times a catalyst can be regenerated is dependent upon factors which cannot be foreseen such as wear and tear and other mechanical damage to the catalyst. Any delay in the development of the market could significantly and adversely affect our results of operations and financial condition.



CoaLogix may be subject to vigorous competition with very large competitors that have substantially greater resources and operating histories.

We are aware of one company, Evonik Energy Services, LLC, formerly known as Steag (“Evonik LLC”), which entered the U.S. catalyst regeneration market in 2008. Evonik LLC has currently built a regeneration facility in North Carolina. Evonik LLC, based in Kings Mountain, North Carolina, is a subsidiary of a German power producer, Evonik Steag GmbH (“Evonik GmbH”). Evonik GmbH is very large and has substantially greater resources than CoaLogix or us. Competition from Evonik may have a material adverse effect on our operations, including a potential reduction in operating margins and a loss of potential business.

We are also aware of at least one other company, Enerfab, Inc. that provides SCR catalyst management, rejuvenation and cleaning services. We are aware of certain companies, including Babcock-Hitachi, who have indicated an interest in offering catalyst cleaning and regeneration, and it is possible that manufacturers of new catalyst and other companies may enter the business of SCR catalyst regeneration. There also are a number of SCR catalyst manufacturers with substantial parent companies that may seek to maintain market share by significantly reducing prices of new SCR catalyst which will put pressure on our operating margins. These companies include Cormetech Inc. (owned by Mitsubishi Heavy Industries and Corning, Inc.), Argillon Group (owned by Johnson Matthey), CERAM, Haldor-Topsoe, Inc. and Babcock-Hitachi. Further, if the SCR catalyst regeneration market expands as we expect, additional competitors could emerge. In addition, if our intellectual property protection is weakened, competition could more easily develop.

SCR-Tech’s lawsuit against Evonik Energy Services LLC, et al. may not be successful, and the counterclaims of Evonik Energy Services LLC against SCR-Tech may be successful. We will incur significant expenses in pursuing our lawsuit against Evonik and in defending against Evonik’s counterclaims.

SCR-Tech’s lawsuit against Evonik Energy Services, LLC and other defendants as described in Item 3, Legal Proceedings, is associated with certain significant risks. The lawsuit will require the time and attention of senior management of SCR-Tech, and could divert attention from other business matters. Expenses of the lawsuit may cause a diversion of significant funds needed by SCR-Tech to fund operations for other aspects of the business.

Due to the nature of litigation, it is not possible to predict the outcome of the lawsuit. We anticipate that the Evonik LLC defendants will continue vigorously defending themselves, and that Evonik LLC will vigorously pursue its counterclaims against SCR-Tech. In the event SCR-Tech is unsuccessful in the lawsuit and Evonik LLC prevails in its counterclaims, Evonik LLC may be awarded substantial damages against SCR-Tech. SCR-Tech has not reserved funds for any loss contingency or legal fees associated with this litigation. In addition, if SCR-Tech is unsuccessful, Evonik LLC will remain a competitor of SCR-Tech.

CoaLogix’ business is subject to customer concentration.

CoaLogix offers SCR catalyst cleaning, rejuvenation and regeneration, as well as SCR system management and consulting services to coal-fired power plants. Some of the utilities operating these plants are exceptionally large and operate a number of such power plants. Thus, one or more large utilities could provide a very large order or orders to CoaLogix which likely would result in one or two such utilities providing most of the orders and revenues for CoaLogix for a particular quarterly or annual period. During 2010, four customers represented approximately 54% of CoaLogix’ revenue. During 2009, two customers represented about 36% of CoaLogix’ revenue. During 2008, three customers represented about 75% of CoaLogix’ revenue. Although large orders are beneficial to CoaLogix by providing a large and consistent source of orders and revenues without the additional cost associated with marketing to a larger number of smaller customers, CoaLogix is dependent on a relatively small number of large utilities for its business. The loss of one of these customers would have a much greater adverse effect on CoaLogix than the loss of a

smaller customer. This may also result in significant swings in orders and revenues on a quarterly basis as well as impacting on our cash flows.

CoaLogix' business may be impacted by changes in government regulation and environmental legislation.

Our business is significantly dependent on the nature and level of government regulation of emissions. For instance, the Environmental Protection Agency's (EPA) Clean Air Interstate Rule (CAIR) was vacated by the District of Columbia Court of Appeals in July 2008, and was subsequently re-instated in December 2008 by the same court just days before the vacature became effective. We expect the EPA to revise CAIR or replace it with other clean air regulations, but we cannot at this time predict the nature of such revisions or replacement regulations. On July 6, 2010, the EPA issued the proposed replacement for CAIR, the "Transport Rule." The public comment period ended in October, 2010, and the EPA is in the process of finalizing the proposed regulation. According to the EPA, the Transport Rule will have the effect of reducing NOx from power plants by 52% over 2005 levels. Without government regulation of coal-fired power generation, SCR catalyst would not be used by utilities, there would be no need for utilities to acquire, clean or regenerate SCR catalyst, and CoaLogix would have no business purpose. Further, changes in or adverse interpretations of governmental accounting or rate-based emissions regulations also could have a material adverse effect on our business. Although government regulation of emissions has become increasingly stringent in recent years, the growing costs associated with such regulations and the economic downturn in the U.S. may limit the level of increase and scope of emissions requirements, which could limit the potential growth of our target markets. Any easing, delay or deferral of governmental emissions requirements or the growth rate of such requirements could have a material adverse effect on our business.

In addition, the coal industry is subject to regular enactment of new or amended federal, state and local environmental and health and safety statutes, regulations and ballot initiatives, as well as judicial decisions interpreting these requirements. These requirements may impose substantial capital and operating costs and operational limitations on us and may adversely affect our business. The requirements may also affect our customers' decisions to utilize our services which may materially adversely affect our business.

Decreases in demand for electricity resulting from economic, weather changes or other conditions could adversely affect demand for CoaLogix' services and its results of operations.

Overall economic activity and the associated demands for power by industrial users can have significant effects on overall electricity demand. An economic slowdown can significantly slow the growth of electrical demand and could result in utilities using their SCR systems less thus extending the life of SCR catalyst. During the current recession demand for electricity has weakened in the U.S. Significant declines in the rate of economic growth in the U.S. could materially affect demand for electricity, which may have an adverse effect on demand for CoaLogix' services.

The use of alternative energy sources for power generation could reduce the use of coal by electric utilities in the U.S., which could result in lower demand for CoaLogix' services and materially and adversely affect our business and results of operations.

Although the Energy Information Agency of the U.S. Department of Energy projects only a gradual decline in use of coal to generate electricity through 2035, the use of coal as a source of power generation in the U.S. could be adversely affected by, among other things:

- the location, availability, quality and price of alternative energy sources for power generation, such as natural gas, fuel oil, nuclear, hydroelectric, wind, biomass and solar power; and

- technological developments, including those related to alternative energy sources.

Gas-fueled generation has the potential to displace coal-fueled generation, particularly from older, less efficient coal-powered generators. We expect that many of the new power plants needed to meet increasing demand for electricity generation will be fueled by natural gas because gas-fired plants are cheaper to construct and permits to construct these plants are easier to obtain as natural gas is seen as having a lower environmental impact than coal-fueled generators. Several states have enacted legislative mandates requiring electricity suppliers to use renewable energy sources to generate a certain percentage of power. There have been numerous proposals to establish a similar uniform, national standard although none of these proposals have been enacted to date. Possible advances in technologies and incentives, such as tax credits, to enhance the economics of renewable energy sources could make these sources more competitive with coal. Any reduction in the amount of coal consumed by domestic electric power generators could reduce the demand for CoaLogix' services, thereby reducing our revenues and materially and adversely affecting our business and results of operations.

CoaLogix' business is subject to potential seasonality.

Prior to the January 1, 2009 effective date of Phase I of CAIR, some utilities and IPPs operated their SCR units only during the "ozone season" (May 1 — September 30). Because of this, CoaLogix' business was more limited than if SCR units were required to operate on a continual basis. During non-ozone season periods, most operators had limited (if any) requirements to run their SCR systems. Given that Phase I of CAIR effectively requires operators run their SCR systems on a continual basis beginning January 1, 2009, we expect less concentration of CoaLogix business during the ozone season each year. However, utilities and IPPs may continue to schedule outages and down time for maintenance during periods beyond our control, resulting in seasonality of CoaLogix' business. These potential fluctuations in revenues and cash flow during a year may be significant and could materially impact our quarterly earnings and cash flow. This may have a material adverse effect on the perception of our business and the market price for Acorn's common stock.

CoaLogix does not own its regeneration facilities, and it is subject to risks inherent in leasing its sites of its operations.

CoaLogix does not own its two regeneration sites; instead it leases one, the Mt. Holly facility, from Clariant Corporation, the U.S. subsidiary of a Switzerland-based public company ("Clariant"), and the other, the Steele Creek facility, from Fat Boy Trading Company ("Fat Boy"), an independent owner of the site, for a combined operating space of approximately 270,000 square feet. Although we believe the Clariant lease terms are favorable, the dependence on Clariant and the site for about 126,000 square feet of operating space could subject SCR-Tech to increased risk in the event Clariant experiences financial setbacks or loses its right to operate the site. This risk is heightened because the site is a Federal Superfund site (under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA")), which increases the risks that the site ultimately could be shut down or that Clariant will be financially unable to continue its ownership of the site or uphold its environmental indemnification covenants. It may be difficult to relocate operations at the Clariant facility to another site on a timely or cost-effective basis in order to maintain our current combined operating space of 270,000 square feet, and CoaLogix' business could be negatively impacted by any problems with continuing to conduct its operations at this site.

CoaLogix could be subject to environmental risks as a result of the operation of its business and the location of its Mt. Holly facility.

The operation of CoaLogix' business and the nature of its assets create various environmental risks. CoaLogix ' leases one of its sites for operations at a property listed on the National Priority List as a Federal Superfund site (the Mt. Holly facility). Five CERCLA Areas (those areas of concern identified under the CERCLA program) are identified on the property, and while CoaLogix does not lease any property identified as a CERCLA Area, one such CERCLA Area has resulted in contamination of groundwater flowing underneath one of the buildings leased by CoaLogix. Although CoaLogix has indemnification from Clariant for any environmental liability arising prior to the operation of CoaLogix' business at the site, we can provide no assurance that such indemnification will be sufficient or that CoaLogix would be protected from an environmental claim from the nature of the site. In addition, the operation of CoaLogix' business involves removal of hazardous wastes from catalyst and the use of significant chemical materials. As a result, CoaLogix could be subject to potential liability resulting from such operations at either facility. To date, neither Acorn nor CoaLogix has been identified as a potential responsible party to such environmental risks, nor have any amounts been recorded to accrue for these potential exposures.

We will be required to continue to make significant capital expenditures to expand CoaLogix' production facilities or for other purposes; we may require additional capital for such purposes.

We incurred substantial capital expenditures during 2010 in order to meet anticipated demand for increased orders for SCR regeneration services in 2010 and beyond. The capital expenditures were used to construct a second SCR regeneration plant at the Steele Creek facility.

If the market does not develop as we expect or increased competition results in loss of significant business, we may not generate enough additional revenue from the capital expenditures incurred during 2010. This could adversely impact our results of operations and financial position going forward. Moreover, other unanticipated expenses for CoaLogix such as litigation or other costs for protecting intellectual property rights or as a result of a significant corporate transaction could result in the need for additional capital. These additional funding requirements may be significant, and funds may not be available when required or may be available only on terms unsatisfactory to us.

Our cash requirements will depend on many factors, including but not limited to the market acceptance of our product and service offerings, the ability of CoaLogix to generate significant cash flow, the rate of expansion of our sales and marketing activities, additional demand for expansion of our production capacity, our ability to manage selling, general and administrative expenditures and the timing and extent of CoaLogix related research and development projects.

In addition, we continue to actively pursue possible business opportunities, including but not limited to, mergers, acquisitions or other strategic arrangements. Such strategic opportunities could require the use of additional cash, or could require additional equity or debt financing. The nature and amount of any such financing or the use of any capital in any such transaction cannot be predicted and will depend on the terms and conditions of the particular transaction.

We believe the demand for CoaLogix' services will continue to increase leading to need for expansion in the future. Such expansion may involve expansion of CoaLogix's, existing facilities or construction of a new facility – all requiring additional capital. There is no assurance that CoaLogix will be able to obtain such additional capital and if CoaLogix is not able to do so, CoaLogix's growth and results of operations will be adversely affected.

Certain of CoaLogix' capital equipment is unique to our business and would be difficult and expensive to repair or replace.

Certain of the capital equipment used in the services performed by CoaLogix has been developed and made specifically for us and would be difficult to repair or replace if it were to become damaged or stop working. In

addition, certain of our equipment is not readily available from multiple vendors. Consequently, any damage to or breakdown of our equipment at a time when we are regenerating large amounts of SCR catalyst at CoaLogix may have a material adverse impact on our business.

CoaLogix is dependent on third parties to perform certain testing required to confirm successful regeneration.

In connection with the regeneration of SCR catalyst, CoaLogix generally must have an independent company provide testing services to determine the level of success of regeneration. Currently there are a limited number of companies providing this service. If CoaLogix is unable to obtain this service on a cost-effective basis, CoaLogix may not be able to perform its regeneration services. In addition, if the testing cannot be completed in a timely manner, there may be a slowdown of operations which can negatively impact the profitability and financial condition of the Company.

Significant price increases in key materials may reduce CoaLogix' gross margins and profitability of regeneration of SCR Catalyst.

The prices of various chemicals used to regenerate SCR catalyst can be volatile. If the long-term costs of these materials were to increase significantly, we would attempt to reduce material usage or find substitute materials. If these efforts were not successful or if these cost increases could not be reflected in our price to customers, then our gross margins and profitability of regenerating SCR Catalyst would be reduced and our ability to operate CoaLogix profitably could be compromised.

There are risks associated with our purchase of used SCR catalyst.

CoaLogix' primary business involves the cleaning and regenerating of customer-owned SCR catalyst. In certain instances, however, CoaLogix may purchase used or "spent" catalyst from utilities for regeneration, as when, for example, a utility wishes to avoid the costs and potential hazardous waste issues associated with the disposal of used or "spent" catalyst. CoaLogix may purchase SCR catalyst for a nominal sum and then regenerate such catalyst for immediate sale, or may purchase spent SCR catalyst on an opportunistic basis for future regeneration and sale. The purchase of spent SCR catalyst involves potential risks to CoaLogix. For example, spent SCR catalyst includes significant hazardous waste, and unlike the regeneration of customer-owned SCR catalyst, the purchase of spent SCR catalyst requires CoaLogix to take ownership or "title" to the SCR catalyst, which may potentially increase CoaLogix environmental risk exposure. Furthermore, if CoaLogix cannot find a customer to purchase the regenerated catalyst, then CoaLogix must either store the spent catalyst, subject to the inherent risk of holding catalyst which has not been regenerated and contains hazardous waste, or incur significant costs to dispose of the spent catalyst in a manner which complies with the strict requirements of applicable environmental laws. In addition, the sale of SCR catalyst may expose CoaLogix to risks not inherent in the cleaning and regeneration of SCR catalyst, including product liability claims. It is unclear as to the amount of SCR catalyst which CoaLogix may purchase, but it is possible such purchases ultimately may be substantial, and may significantly increase the risk profile of CoaLogix' business.

Many of the risks of our business have only limited insurance coverage and many of our business risks are uninsurable.

Our business operations are subject to potential environmental, product liability, employee and other risks. Although we have insurance to cover some of these risks, the amount of this insurance is limited and includes numerous exceptions and limitations to coverage. Further, no insurance is available to cover certain types of risks, such as acts of God, war, terrorism, major economic and business disruptions and similar events. In the event we were to suffer a significant environmental, product liability, employee or other claim in excess of our insurance or a loss or damages relating to an uninsurable risk, our financial condition could be negatively impacted. In addition, the cost of our insurance has increased substantially in recent years and may prove to be prohibitively expensive, thus making it impractical to obtain insurance. This may result in the need to abandon certain business activities or subject ourselves to the risks of uninsured operations.





New technologies could be developed which make SCR catalyst obsolete.

CoaLogix' business is dependent upon the needs of coal-fired power plants to replace or regenerate SCR catalyst. It is possible that at some point in the future new technology may be developed which replaces SCR catalyst as the preferred solution for removing NOx from the power plant exhaust. In such event, CoaLogix' business would be materially and adversely affected.

Inability to meet customer guarantees.

CoaLogix is often required to provide its customers with guarantees for performance of the SCR catalyst regenerated by CoaLogix. If CoaLogix is unable to meet customer guarantees, CoaLogix may have to re-perform the affected regeneration job, pay liquidated damages to the customer or both, any of which would have the effect of reducing CoaLogix' profit margin and possibly materially adversely affecting its results of operations.

#### RISKS RELATED TO DSIT SOLUTIONS

Failure to accurately forecast costs of fixed-priced contracts could reduce our margins.

When working on a fixed-price basis, we undertake to deliver software or integrated hardware/software solutions to a customer's specifications or requirements for a particular project. The profits from these projects are primarily determined by our success in correctly estimating and thereafter controlling project costs. Costs may in fact vary substantially as a result of various factors, including underestimating costs, difficulties with new technologies and economic and other changes that may occur during the term of the contract. If, for any reason, our costs are substantially higher than expected, we may incur losses on fixed-price contracts.

Hostilities in the Middle East region may slow down the Israeli high-tech market and may harm our Israeli operations; our Israeli operations may be negatively affected by the obligations of our personnel to perform military service.

Our software consulting and development services segment is currently conducted in Israel. Accordingly, political, economic and military conditions in Israel may directly affect DSIT. Any increase in hostilities in the Middle East involving Israel could weaken the Israeli hi-tech market, which may result in a significant deterioration of the results of our Israeli operations. In addition, an increase in hostilities in Israel could cause serious disruption to our Israeli operations if acts associated with such hostilities result in any serious damage to our offices or those of our customers or harm to our personnel.

Exchange rate fluctuations could increase the cost of our Israeli operations.

A majority of DSIT's sales are based on contracts or orders which are in U.S dollars or are in New Israeli Shekels ("NIS") linked to the U.S. dollar. At the same time, most of DSIT's expenses are denominated in NIS (primarily labor costs) and are not linked to any foreign currency. While the dollar value of the revenues of our operations in Israel will increase if the dollar is devalued in relation to the NIS, the net effect of such devaluation is that DSIT's costs in dollar terms increase more than our revenues.

In 2010 the NIS strengthened in relation to the U.S. dollar by 6.0%. DSIT enters into forward contracts to try to mitigate its exposures to exchange rate fluctuations; however, we can provide no assurance that such controls will be implemented successfully.



We are substantially dependent on a small number of customers and the loss of one or more of these customers may cause revenues and cash flow to decline.

In 2010, 60% of DSIT's revenues were concentrated in three customers. These customers are expected to continue to make up a significant portion of DSIT's revenues and cash flow for 2011. A significant reduction of future orders or delay in milestone payments from any of these customers could have a material adverse effect on the performance of DSIT.

We are dependent on meeting milestones to provide cash flow for operations.

Our present operations, as we are currently structured, place a great reliance on our meeting project milestones in order to generate cash flow to finance our operations. Should we encounter difficulties in meeting significant project milestones, resulting cash flow difficulties could have a material adverse effect on our operations.

We must at times provide significant guarantees in order to secure projects. These guarantees are often collateralized by restricted deposits.

Some of the projects we perform require significant performance and/or bank guarantees. At December 31, 2010, DSIT has \$3.1 million of performance and bank guarantees outstanding. In addition, DSIT has on deposit at two Israeli banks approximately \$1.0 million collateralizing some of these guarantees. These deposits are restricted and, accordingly, DSIT cannot use these funds for operations until the guarantees which are being collateralized are released. At times, this can create cash flow difficulties which could have a material adverse effect on our operations.

In addition, DSIT may not always be able to supply such guarantees without financial assistance from Acorn. If Acorn needs to provide financial guarantees for DSIT, Acorn may not have sufficient funds available to it to invest in other emerging ventures or take advantage of opportunities available to us in a timely manner. At December 31, 2010, Acorn had on deposit \$0.3 million of restricted cash at two Israeli banks collateralizing DSIT guarantees.

If we are unable to keep pace with rapid technological change, our results of operations, financial condition and cash flows may suffer.

Some of our solutions are characterized by rapidly changing technologies and industry standards and technological obsolescence. Our competitiveness and future success depends on our ability to keep pace with changing technologies and industry standards on a timely and cost-effective basis. A fundamental shift in technologies could have a material adverse effect on our competitive position. Our failure to react to changes in existing technologies could materially delay our development of new products, which could result in technological obsolescence, decreased revenues, and/or a loss of market share to competitors. To the extent that we fail to keep pace with technological change, our revenues and financial condition could be materially adversely affected.

We are dependent on a number of suppliers who provide us with components for some of our products.

A number of our suppliers provide us with major components for some of our products for our Energy & Security Sonar Solutions. Some of these components are long-lead items. If for some reason, the suppliers cannot provide us with the component when we need it and we cannot easily find substitute suppliers on similar terms, we may have increased costs and/or delays in delivering a product to a customer and incur penalties and lose customer confidence. In addition, project delays can also slow down revenue recognition and our financial condition could be materially adversely affected. While we are constantly attempting to develop secondary and tertiary suppliers for these components, we can provide no assurance that we will be successful in doing so on terms acceptable to us.



We are a relatively small company with limited resources compared to some of our current and potential competitors, which may hinder our ability to compete effectively.

Some of our current and potential competitors have longer operating histories, significantly greater resources and broader name recognition than we have. As a result, these competitors may have greater credibility with our existing and potential customers. They also may be able to adopt more aggressive pricing policies and devote greater resources to the development, promotion and sale of their products than we can to ours, which would allow them to respond more quickly than us to new or emerging technologies or changes in customer requirements.

#### RISKS RELATED TO GRIDSENSE

GridSense has incurred net losses and may never achieve sustained profitability.

GridSense has incurred net losses for the years ended December 31, 2009 and 2010. We believe that GridSense will reduce its losses in 2011; however, we can provide no assurance that GridSense will generate sufficient revenues and cash flow to allow it to become profitable or to sustain profitability or to have positive cash flows.

GridSense will need additional financing to grow and finance its operations

GridSense will continue to require additional working capital support in order to finance its operations in 2011. This support may be in the form of a bank line, new investment by others, additional investment by Acorn, or a combination of the above. Since January 1, 2011, Acorn has lent GridSense \$250,000. We have no assurance that such additional support will be available in sufficient amounts, in a timely manner and on acceptable terms. The availability and amount of any additional investment from Acorn may be limited by the working capital needs of our corporate activities and other operating companies

GridSense's products and services may not gain market acceptance or competitors may introduce offerings that surpass those of GridSense.

The primary market for GridSense's products and services is rapidly evolving which means that the level of acceptance of products and services that have been released recently or that are planned for future release by the marketplace is not certain. If the markets for GridSense's products and services fail to develop, develop more slowly than expected or become subject to intense competition, its business will suffer. As a result, GridSense may be unable to: (i) successfully market its current products and services, (ii) develop new products, services and enhancements to current products and services, (iii) complete customer installations on a timely basis or (iv) complete products and services currently under development. If GridSense's products and services are not accepted by its customers or by other businesses in the marketplace, GridSense's business and operating results will be materially affected. In addition, we can provide no assurance that GridSense will be successful in deriving significant revenue growth through its current strategy and marketing initiatives.

GridSense's products are subject to regulatory approvals.

Numerous regulations govern the manufacture and sale of GridSense's products in the United States and other countries where GridSense intends to market its products. Such regulation bears upon the approval of manufacturing techniques, testing procedures and approval for the manufacturing and sale of GridSense's products, including advertising and labeling.

Any failure or delay in obtaining regulatory approvals would adversely affect our ability to market our products. Furthermore, product approvals may be withdrawn if problems occur following initial marketing or if compliance

with regulatory standards is not maintained. The failure, delay or withdrawal of a previously given regulatory approval could materially adversely affect our revenues, cash flows and financial position.

Sales to utilities are generally characterized by long sales cycles.

GridSense's sales are largely dependent on the sales cycle of electric utilities which is typically long and requires much technical and application support. The purchasing cycle for a utility may involve an evaluation trial or pilot, analysis of data and results, review of competitor's offerings and smaller scale deployments, before a purchasing decision is made. For large orders, some utilities are required to solicit competitive bids from other vendors which can contribute more time. The entire process can take anywhere between several weeks to several quarters. Delays in securing purchase orders can materially adversely affect our revenues, cash flows and financial condition.

GridSense is attempting to broaden its revenue base by expanding into the North American market.

GridSense is currently generating a large portion of its revenue from sales in Australia (more than 60% for the 2010 calendar year). GridSense believes that its continued growth and profitability will require additional expansion of sales in other markets, most notably the North American market. To the extent that GridSense is unable to expand sales into other markets in a timely and cost-effective manner, its business, operating results and financial condition could be materially adversely affected. In addition, even with the successful recruitment of additional personnel and international resellers, there can be no assurance that GridSense will be successful in maintaining or increasing international market demand for its products.

Exchange rate fluctuations could increase the cost of GridSense's Australian operations.

GridSense has operations in both the U.S. and Australia. Its Australian operations are subject to the volatility of the Australian dollar vis-à-vis the U.S. dollar (in 2010 the Australian dollar strengthened in relation to the U.S. dollar by 13%). While risks are somewhat mitigated by the fact that GridSense's Australian operation's sales and expenses are primarily denominated in Australian dollars, currency fluctuations may impact the translation of certain balance sheet items, affect the economics of manufacturing and ultimately affect its financial performance.

GridSense's market is subject to rapidly changing technologies.

GridSense's markets its products in a field where electronics and software/firmware dominate. This fast changing area may generate unknown methods of detecting and monitoring disturbances that could render GridSense's technology inferior, resulting in GridSense's results of operations being materially adversely affected. GridSense does, however, closely monitor trends and changes in technologies and customer demand that could adversely impact its competitiveness and overall success.

GridSense is subject to vigorous competition with very large competitors that have substantially greater resources and operating histories.

Some of GridSense's competitors in the markets it serves are larger, better capitalized and have greater resources than GridSense. As GridSense grows and penetrates markets where larger companies have been established, it may experience a reduced rate of growth due to competitive forces. Competition from these competitors may have a material adverse effect on our operations, including a potential reduction in operating margins and a loss of potential business.

## RISKS RELATED TO USSI

USSI is a development stage company with a limited operating history.

USSI was formed in November 2007 and has a limited operating history. Many of its products are at a research and development stage and substantial time, effort and financial resources may be required before we will be profitable. USSI's operations are subject to all of the risks inherent in the establishment of a new business enterprise, especially one that is dependent on developing new products for the oil & gas and security industries. The likelihood of USSI's success should be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with establishing a new business such as uncertainty in product development, uncertainty in market acceptance of the its products, competition, and changes in business strategy. USSI has no assurance that it will be successful in its business activities.

### History of Operating Losses; Anticipated Losses

Since its inception, USSI has had annual operating losses. USSI expects to continue to have operating losses for year ended December 31, 2011 and possibly beyond as a result of increases in operating expenses required to commence manufacturing and to expand its sales and marketing operations. USSI can provide no assurance that it will ultimately generate sufficient revenues to allow it to become profitable, to sustain profitability or to have positive cash flows.

USSI will need additional financing to grow its business and finance its operations

In the period since Acorn's initial investment in November 2009 through February 28, 2011, it has invested \$2.5 million in USSI. In addition, Acorn has an option to invest an additional \$1.5 million in USSI by May 31, 2011.

USSI has no assurance that Acorn will exercise this option. USSI also has no assurance that even if Acorn does exercise all of these options, that USSI's future capital needs will not exceed these amounts or that USSI will generate sufficient cash flow to fund its operations in the absence of additional funding sources. USSI will likely need to raise additional funds if revenues fail to meet projections or to fund a rapid expansion to meet product demand, respond to competitive pressures or acquire complementary products, businesses or technologies. If additional funds are raised through the direct issuance of equity or convertible debt securities to third parties, Acorn's percentage ownership of USSI may be reduced.

In addition, should additional funds be needed, there can be no assurance that additional financing will be available on terms acceptable to USSI. If funds are not available, or are not available on acceptable terms, USSI may not be able to fund its growth, respond to competitive pressures or take advantage of unanticipated acquisition opportunities. Accordingly, this could materially and adversely affect USSI's business, results of operations and financial condition.

USSI is a small company with limited resources compared to some of its current and potential competitors, which may hinder its ability to compete effectively.

Some of USSI's current and potential competitors have longer operating histories, significantly greater resources and broader name recognition than does USSI. As a result, these competitors may have greater credibility with USSI's existing and potential customers. They also may be able to adopt more aggressive pricing policies and devote greater resources to the development, promotion and sale of their products than can USSI to its products, which would allow them to respond more quickly than USSI to new or emerging technologies or changes in customer requirements.



If USSI is unable to keep pace with technological change, USSI's results of operations, financial condition and cash flows may suffer.

Many of USSI's products are in the research and development stage. In addition, some of USSI's existing products may require additional engineering and upgrades in conjunction with market developments as well as specific customer needs. There can be no assurance that USSI will continue to be successful in its engineering efforts regarding the development of its products and future technological difficulties could adversely affect its business, results of operations and financial condition.

USSI is not yet ready to manufacture its products in commercial quantities.

In order to be successful, USSI's products must be manufactured in commercial quantities at an acceptable cost and must meet the specifications required by the customers regarding quality. USSI's space and manufacturing capabilities at its current facilities in Northridge, California are not expected to be sufficient to handle the anticipated increase in sales for the near future. Should USSI require additional manufacturing capacity, there can be no assurance it will be able to increase the size and quality of its manufacturing processes fast enough to meet demand. Any material delays by USSI or any unanticipated manufacturing difficulties could materially and adversely affect its business, results of operations and financial condition.

USSI is dependent on a number of suppliers who provide it with key components for some of its products.

USSI's products incorporate "state of the art" technologies. As such, in many cases there are limited supplies of key components. In particular, USSI currently relies on a single source for the development of its high-end interrogators for some of its technologically advanced product offerings. USSI has not yet found a second source supplier that is economically feasible to use at this time. While USSI continues to try to mitigate the risks associated with this key component, any production delays by this supplier or any adverse change to its financial condition could materially and adversely affect USSI's business, results of operations and financial condition.

USSI's targeted customers may be reluctant to try its alternative solution despite its increased reliability and lower cost.

Potential customers may elect to continue to use the existing expensive and less reliable technologies given their familiarity of the existing products in the market plane. The competition in USSI's markets may have superior resources and marketing ability which could lead to potential customers selecting existing products over USSI's products. While USSI continues to develop its products and invest in marketing efforts accordingly, there is no assurance that USSI's products will be preferred in the market place relative to the competition with superior overall resources. If the market place does not adopt USSI's products as anticipated, USSI's business, results of operations and financial condition could be materially and adversely affected.

Failure to accurately forecast costs of fixed-priced contracts could reduce USSI's margins.

When working on a fixed-price basis, USSI undertakes to deliver solutions to a customer's specifications or requirements for a particular project. The profits from these projects are primarily determined by USSI's success in correctly estimating and thereafter controlling project costs. Costs may in fact vary substantially as a result of various factors, including underestimating costs, difficulties with new technologies and economic and other changes that may occur during the term of the contract. If, for any reason, USSI's costs are substantially higher than expected, USSI may incur losses on fixed-price contracts.

USSI may lose sales if it is unable to obtain government authorization to export its products.

The export of some of USSI's products may be subject to export controls imposed by the U.S. government and administered by the U.S. Departments of State and Commerce. In certain instances, these regulations may require pre-shipment authorization from the administering department. For products subject to the Export Administration Regulations ("EAR") administered by the Department of Commerce's Bureau of Industry and Security, the requirement for a license is dependent on the type and end use of the product, the final destination and the identity of the end user. All USSI products that are exported are subject to EAR; however, most of USSI's equipment i