

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

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, 2019

Commission file number: 001-31972

TELKONET, INC.

(Exact name of registrant as specified in its charter)

Utah
(State or Other Jurisdiction of Incorporation or Organization)

87-0627421
(I.R.S. Employer Identification No.)

20800 Swenson Drive Suite 175, Waukesha, WI
(Address of Principal Executive Offices)

53186
(Zip Code)

(414) 302-2299
(Registrant's Telephone Number, Including Area Code)

Securities Registered pursuant to Section 12(b) of the Act: None

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
None	None

Securities Registered pursuant to section 12(g) of the Act: Common Stock, \$.001 par value

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(b) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities and 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 every Interactive Data File required to be submitted 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 such files). Yes No

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act) Yes No

Aggregate market value of the voting stock held by non-affiliates (based upon the closing sale price of \$0.12 per share on the Over the Counter Bulletin Board) of the registrant as of June 28, 2019: \$14,727,180

Number of outstanding shares of the registrant's par value \$0.001 common stock as of March 23, 2020: 135,990,491.

Part III is incorporated by reference from the Proxy Statement for the Annual Meeting of Shareholders to be held on May 28, 2020.

TELKONET, INC.
FORM 10-K
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PART I

ITEM 1. DESCRIPTION OF BUSINESS.

Some of the statements contained in this Annual Report on Form 10-K discuss future expectations, contain projections of results of operations or financial condition or state other “forward-looking” information. Those statements include statements regarding the intent, belief or current expectations of Telkonet, Inc. (“we,” “us,” “our” or the “Company”) and our management team. Words such as “expects,” “anticipates,” “targets,” “goals,” “projects,” “intends,” “plans,” “believes,” “seeks,” “estimates,” “continues,” “may,” and variations of these words, as well as similar expressions, are intended to identify such forward-looking statements. In addition, any statements that refer to projections of our future financial performance, our anticipated growth, trends in our businesses, and other characterizations of future events or circumstances are forward-looking statements. Any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and actual results may differ materially from those projected in the forward-looking statements. These risks and uncertainties include but are not limited to those risks and uncertainties set forth in Item 1A of this report. In light of the significant risks and uncertainties inherent in the forward-looking statements included in this report, the inclusion of such statements should not be regarded as a representation by us or any other person that our objectives and plans will be achieved.

GENERAL

Business

Telkonet, Inc. (the “Company”, “Telkonet”), formed in 1999 and incorporated under the laws of the state of Utah, is the creator of the EcoSmart Platform of intelligent automation solutions designed to optimize energy efficiency, comfort and analytics in support of the emerging Internet of Things (“IoT”). The platform is deployed primarily in the hospitality, educational, governmental and other commercial markets, and is specified by engineers, HVAC professionals, building owners, and building operators. We currently operate in a single reportable business segment.

In 2007, the Company acquired substantially all of the assets of Smart Systems International (“SSI”), which was a provider of energy management products and solutions to customers in the United States and Canada and the precursor to the Company’s EcoSmart platform. The EcoSmart platform provides comprehensive savings, management reporting, analytics and virtual engineering of a customer’s portfolio and/or property’s room-by-room energy consumption. Telkonet has deployed more than a half million intelligent devices worldwide in properties within the hospitality, educational, governmental and other commercial markets. The EcoSmart platform is recognized as a solution for reducing energy consumption, operational costs and carbon footprints, and eliminating the need for new energy generation in these marketplaces – all whilst improving occupant comfort and convenience.

The Company previously provided high-speed internet access services through its wholly-owned subsidiary, Ethostream, LLC (“Ethostream”). In 2016, the Company decided to focus on its higher growth potential EcoSmart Platform line and made the decision to sell Ethostream. On March 28, 2017, the Company sold substantially all of the assets of Ethostream to DCI-Design Communications LLC.

See Part I, Item 1A. “Risk Factors”, Part II, Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, and the Notes to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for a discussion of the impact that the COVID-19 pandemic may have on the Company’s financial and operational results.

ECOSMART

Telkonet's EcoSmart Platform is comprised of four primary pillars:

- **EcoSmart Product Suite:** The suite of intelligent hardware products designed and developed to provide monitoring, management and reporting over individual and grouped energy consumption throughout building environments. Products include thermostats, sensors, switches, and outlets.
- **EcoCentral:** The cloud-based dashboard that provides visualization and remote management of Telkonet's monitoring, reporting and analytics through deployed EcoSmart and integrated products. EcoCentral is the intelligence behind the EcoSmart platform.
- **EcoCare:** Telkonet's professional support and maintenance services including 24/7 monitoring, engineering, analytics, reporting, software and hardware updates, extended warranty, project and relationship management and onsite support. All professional support and maintenance staff reside in Telkonet's headquarters.
- **EcoSmart Mobile:** iOS and Android applications provided by Telkonet to its partners, customers and end users and guests enabling provisioning, management, access and control over EcoSmart deployments and functionality.

The EcoSmart Platform provides comprehensive energy and operational savings, management monitoring, reporting, analytics of a property or individual room by adding intelligence to HVAC runtimes and through integrations with door locks, lighting, window coverings, and more end-user attributes. The EcoSmart Platform is rapidly becoming a leading solution for reducing energy consumption, operational costs and carbon footprints, and eliminating the need for new energy generation in these markets – all while engaging and delighting guests.

Controlling energy consumption can make a significant impact on a building's bottom line, as HVAC costs represent a substantial portion of a facility's overall utility bill. Hospitality is a key market for Telkonet. According to the EPA EnergySTAR Portfolio Manager 2015 analysis, the median hotel uses approximately 187 kBtu/ft² from all energy sources.^[1] On average, America's approximately 47,000 hotels spend \$2,196 per available room each year on energy, representing 3% - 6% of all operating costs and 60% of carbon emissions^[2]. Telkonet approaches the opportunity to reduce consumed energy by adding intelligence to a property's HVAC and lighting systems.

Energy is often wasted through the lighting, powering, heating and cooling of unoccupied spaces. These spaces with intermittent occupancy constitute Telkonet's target markets, and our experience, supported by independent research and customer data, suggests these rooms are unoccupied as much as 70% of the time.

EcoSmart Product Suite:

- **EcoInput:** A lighting controller installed directly in line with existing light switches, making them intelligent and manageable. IoT solutions are no longer hindered by interior design requirements, often mandating specific light switches be featured in guest rooms, which can result in increased project costs. It is compatible with LED, CFL, and incandescent lighting for enhanced dimming controls.
- **EcoTouch Thermostat:** An all touch capacitive thermostat interface available in wired and wireless models offering a premium aesthetic. The EcoTouch allows building owners to match the thermostat with the design of their room by changing the color of the outer edge and by selecting between black or white options.
- **EcoInsight Thermostat:** A programmable and controllable wired thermostat with over 125 configurable settings used to control the efficiency of HVAC through the use of environment variables and triggers.
- **EcoAir Thermostat:** A wireless thermostat mirroring the EcoInsight footprint while enabling the relocation of in room controls without the usual construction expense and downtime.
- **EcoSource Controller:** The remote HVAC control device associated with Telkonet's thermostat interfaces allowing control while removing the need for expensive rewiring and construction. The EcoSource may also be used for third-party integrations, monitoring and control scenarios.
- **EcoSmart VRF Controller:** Works with most of the new variable refrigerant systems coming to market. The devices replace the EcoSource where discrete relays are not available.
- **EcoConnect Bridge:** An Ethernet to Zigbee bridge that serves as the coordinator for all EcoSmart devices connected to the intelligent automation network, managing approximately 30 - 70 device connections each.
- **EcoCommander Gateway:** EcoSmart's network-edge gateway server that provides real-time proactive data aggregation, analytics, reporting and management of the EcoSmart product suite.
- **EcoSense Occupancy Sensor:** A remote occupancy sensor that monitors environments with ultra, high-sensitive sensors designed to detect motion or body heat. All sensors are programmed to ensure accurate occupancy detection. The EcoSense Occupancy Sensor may be hardwired or programmed to communicate wirelessly and may be battery operated or utilize external power.
- **EcoSwitch Light Switch:** An EcoSmart energy management product with the appearance of a traditional 'rocker' light switch. Turning lights off, even for a short time, saves energy and extends lamp life. The EcoSwitch can be used to compose and automate dramatic lighting scenes in a room.
- **EcoGuard Outlet:** An EcoSmart control that acts as the replacement for an in-wall outlet and has the ability to monitor and control the flow of power to one or both outlets. Based on occupancy, it can turn off lamps, televisions, appliances, and any other energy-consuming loads that are plugged in, preventing a property from consuming power in an empty room. The EcoGuard completely disconnects devices from the power supply, preventing lights and other in-room electronics from needlessly consuming energy as well as providing monitoring of energy flow and efficiency when a plug is enabled.
- **EcoContact Door & Window Sensor:** A remote, wireless door/window contact with the ability to provide additional occupancy data and control HVAC operability and other consumption measures when doors or windows are open.

^[1] Facility Type: Hotels - https://www.energystar.gov/sites/default/files/tools/DataTrends_Hotel_20150129.pdf

^[2] Hotels-Energy Star - http://www.energystar.gov/sites/default/files/buildings/tools/SPP_Sales_Flyer_for_Hospitality_and_Hotels.pdf

Several of these devices have been recently released in “Plus” models which provide greater functionality and increased capabilities.

EcoCentral

Telkonet’s EcoSmart Platform is a comprehensive solution for intelligent automation and energy management. The platform has a well-developed upgrade path with the final and complete version of the platform offering real-time control and analytics provided through a cloud computing platform called EcoCentral. EcoCentral derives its name through its ability to direct user resources to where they add the most value. From monitoring equipment operation and determining where engineering efforts are needed and notifying staff when performance is degrading, EcoCentral creates a comprehensive tool for providing insights and access for EcoSmart Platform deployments either individually or across an entire building portfolio.

EcoCare

EcoCare is Telkonet’s professional support services including call, email and chat support, repair and replacement services, periodic reporting, communication with customers’ utility and Internet Service Provider (“ISP”) partners and more. Telkonet provides three packages of EcoCare services as well as allows customers to create their own package of services ala carte. EcoCare allows EcoSmart customers to ensure that they continue to recognize the savings estimated and benefit from the intended return on investment (ROI). Typical EcoCare contracts range from one to five years and have automatic renewal terms built into each individual contract. All support staff are located at Telkonet’s Waukesha, Wisconsin headquarters.

EcoSmart Mobile

Telkonet’s EcoMobile tools provide iOS and Android applications for use by partners, customers, end users or guests. These mobile tools extend the value of the EcoSmart Platform and give greater functionality and more efficient commissioning and deployment abilities to the user. We have identified where, by providing more accessibility, we can create additional charged-for services that increase customer savings, improve guest experience and integrate more fully with customer environments to create a tight relationship with our customers.

Intelligent Energy Management

Telkonet’s EcoSmart energy management platform applies and improves building intelligence to deliver energy and cost savings through controlling lighting, plugload and HVAC runtimes. Captured data may be presented on a grouped, property or room-by-room basis, allowing very granular management of in-room energy use and environmental conditions. EcoSmart achieves this by leveraging our device platform, including occupancy sensors and intelligent programmable thermostats connected with packaged terminal air conditioner (“PTAC”) controllers or any other terminal equipment HVAC products and managed wireless light switches and in wall electrical plugs to adjust and maintain energy consumption including a room’s temperature according to occupancy, eliminating wasteful heating and cooling of unoccupied rooms. All of these can be accomplished from the in-room devices or via any web-connected device, such as smart phones, tablets and laptop computers.

EcoSmart is an energy management platform that delivers optimal, individual room energy savings without compromising occupant comfort, due to a proprietary technology named “Recovery Time”.

Recovery Time Technology

EcoSmart’s HVAC controls feature Recovery Time, technology designed to maximize energy efficiency without sacrificing occupant comfort. When a room is occupied, the temperature selected by the occupant will be maintained by the EcoSmart system. Once an EcoSmart occupancy sensor determines that the room is unoccupied, the system adjusts the room temperature using Recovery Time. Unlike other systems, Recovery Time technology constantly performs calculations that evaluate how far each individual room’s temperature can drift from the occupant’s preferred setting (“set-point”), to harvest energy savings while still being able to return to the occupant’s set-point within a customer’s pre-defined period of time.

When determining the temperature setting, Recovery Time technology considers how long it will take to return the temperature to the occupant's set-point once they return to their room. The temperature will only drift far enough to ensure the system will return to the occupant's preferred temperature setting within minutes upon their return to the room. The specific length of recovery time is selected by property management at the time of the installation; however, it can be altered at any time by management.

How Do Other Systems Work?

In competing systems the occupant chooses their preferred temperature. When the occupant leaves, the thermostat reverts to a set-point of a fixed number of degrees different than the preferred set temperature (lower in winter and higher in summer). In some products temperature gap is a fixed temperature selected by the property owner. Because each occupant room will require different lengths of time to return to the occupant's desired temperature, based on room size and orientation, whether blinds are open, outdoor temperature, sun, and wind, the length of time required for the HVAC to return to temperature can vary dramatically and can often be prohibitive. Additionally, a dirty HVAC filter or coil will reduce heat transfer, increasing that recovery time.

EcoSmart Delivers Room-by-Room Savings

Because each room's environment is unique, Telkonet's approach is likewise unique. Rooms are evaluated independently in real-time to determine its energy efficient temperature, or setback. Recovery Time technology constantly calculates in real-time how far the room temperature can drift, by taking into consideration the environmental characteristics that impact the temperature in the room, including:

- The occupant's preferred temperature setting
- The location of the room within the building
- The window placement – facing the sun or shade
- If the drapes are open or closed
- If the climate is dry or humid
- The varying weather conditions throughout the day
- The condition of the HVAC unit, such as age and efficiency

Through the constant monitoring of the HVAC unit's ability to drive the temperature and the real-time adjustment of the setback temperature, rooms are never excessively hot or cold when an occupant returns to the room. The room will always be just minutes away from an occupant's desired comfort setting. As a result, Recovery Time technology delivers room-by-room, occupant-by-occupant savings. The technology also significantly improves the guest experience, driving loyalty to the property and brand, and decreases service calls.

The EcoSmart Platform maximizes energy reductions while at the same time ensuring occupant comfort, maximizing energy savings and extending equipment life expectancy. The technology is particularly attractive to customers in the hospitality industry, as well as the education, healthcare, public housing and government/military markets, who are constantly seeking ways to reduce costs and meet federal and state mandates without impacting building occupant comfort.

Using standard communication protocols, ensuring widespread adoption and a simple interface, EcoSmart technology may also be integrated with utility controls, property management systems and building automation systems to be used in load shedding initiatives. This feature provides management companies and utilities enhanced opportunities for cost savings, environmental protections and energy management. Additionally, Telkonet's energy management systems qualify for most state and federal energy efficiency and rebate programs.

Competitive Advantages

We believe our intelligent automation platform, with our proprietary Recovery Time technology, delivers extensive differentiation against competing products, including:

- Technology that evaluates each room's environmental conditions results in maximum energy savings;
- The ability to reduce HVAC runtimes increases overall equipment life;
- Increased occupant control and comfort, driving brand and property loyalty;
- Multiple thermostat options, including wired and wireless, to fit a brand's image and application;
- Backlight of thermostat improves the experience for the visually impaired;
- Web-based access with extremely powerful and simple dashboard web interface;
- Breadth of HVAC system compatibility;
- Adaptive learning and system programming;
- Utility-integrated events capabilities;
- Remote HVAC control network;
- Expert EcoCare support, staffed in the USA;
- Plug load, lighting and HVAC controls;
- Extensive 3rd-party integrations, including lighting, door locks, window treatments and building management systems;
- Industry standard software and communication protocols, Linux and ZigBee;
- ROI in as little as two years; and
- Mobile applications provide installation, remote management and end-user accessibility.

Our open, scalable and standards-based architecture approach allows for truly custom deployments. The EcoSmart Platform integrates seamlessly with back-office management systems, property management systems, building automation systems, and utility demand/response programs, as well as additional third-party network architecture to recognize increased efficiency and savings.

Based on these platform features and capabilities, we've been awarded, and continue to receive, contracts in the hospitality, educational, governmental and other commercial markets. In addition, our relationships with utility-sponsored direct-install and rebate-funded programs provide us with a significant advantage over our competitors in the commercial space.

Given the population growth in the United States and the increasing demand for energy, we forecast additional energy-related infrastructure will be needed. We believe the use of Smart Grid technologies and energy efficiency management platforms are affordable alternatives to building additional power generation through leveraging existing resources and providing enhanced energy savings costs.

Target Markets

Rooms with intermittent occupancy are most commonly found in the following market sectors:

- **Hospitality:** hotels, motels, resorts, timeshares and casinos.
- **Educational:** residence halls, dormitories and other campus living options. Also K-12 environments with distributed and portable classrooms.
- **Government:** residence halls, barracks, military apartments and other campus living options.
- **Healthcare:** medical office buildings, assisted and independent living facilities.
- **Multiple Dwelling Units ("MDUs"):** apartments and other public living options.

Industry and Market Overview

According to the U.S. Department of Energy, 44% of all the energy consumed by commercial buildings in the United States is employed to cool, heat, or light, within commercial buildings.^[3] In an effort to remain competitive and manage expenses, governments, building owners, building tenants, and companies in general are looking for ways to become more efficient both fiscally and environmentally. The American Council for an Energy Efficient Economy reported that the cost of saving one unit of energy through energy efficiency is one-fifth (1/5) the cost required to generate that same unit of energy. As a result, we feel that the growth opportunities in the energy management market are in their infancy.

A 2017 report issued by Navigant Research, titled, "Energy Efficient Buildings Global Outlook", stated that the global market for energy efficient building technologies is expected to reach nearly \$360.6 billion in 2026.^[4] The report asserts that the Internet-of-Things ("IoT") is partly responsible for one of the most dramatic changes to the market landscape in its history, and that OEMs and providers are adjusting their strategies to address specific market needs. HVAC has been identified as one of nine key categories.

Telkonet's key industries are all prime candidates for energy management, in part due to their utilizing energy "on-demand" or intermittently. Providing energy, and engaging the equipment to supply it, to those rooms and spaces only when occupied results in significant energy savings in addition to affording longer life and reduced maintenance to the HVAC systems.

^[3] U.S Energy Information Administration - www.eia.gov/energyexplained/images/charts/energy_use_commercial_bldgs.jpg

^[4] Energy Efficient Buildings: Global Outlook - <https://www.navigantresearch.com/research/energy-efficient-buildings-global-outlook>

Hospitality Industry

There is a constant balancing act for hotel operators between managing guest comfort and operating margins. The EcoSmart platform's Recovery Time allows operators to manage operation costs yet still provide for a comfortable and engaging guest experience. In fact, the EcoSmart platform individual brands and properties can create a desired guest environment, and still allow for energy savings via the Recovery Time algorithm. Telkonet has proven that the EcoSmart platform can deliver a return on investment in less than three years for hospitality customers.

Educational Industry

Telkonet approaches the education industry with strategic relationships with enterprise energy service companies ("ESCOs") throughout the USA. Telkonet partners with ESCOs to include our EcoSmart energy management platform for deployment within residence halls on university campuses. The ESCOs bundle our technology with other facility improvement measures designed to reduce operating costs across the entire campus, bundling solutions with acceptable ROI and which meet state mandated guidelines. ESCOs also structure self-funding financial transactions called "Performance Contracts" in which the savings are greater than the repayment costs, typically guaranteeing the financial and operational performance in this type of engagement. This type of approach can remove any capital expense barriers and improve adoption.

During our history, deployments have occurred at the University of California-Davis, University of Miami, Kansas State University, North Carolina State University, University of Notre Dame, US Military Academy at West Point, New York University, and Texas A&M University-Commerce.

The opportunities in this market are not limited to higher education institutions. According to an NRG Business Energy Advisor report, schools in the United States spend \$8 billion on energy costs annually, with 73% of natural gas use going towards heating and 35% of electricity consumption going towards cooling. While heating and cooling account for only 2 – 4% of district costs, it is an opportunity for significant impact and gain.

We believe that our EcoSmart Platform is an important tool for participants in the education industry seeking to control student-related energy costs. We have focused our sales efforts on members of the education industry who are seeking to expand their energy efficiency initiatives as well as the ESCOs who target the educational marketplace and have thus far had success with at least one school district installing EcoSmart in each classroom throughout the district.

Governmental Industry

The Department of Defense ("DOD") is the single largest energy consumer in the United States, accounting for about 90 percent of the federal government's energy use and using over 30,000 giga-watt hours of electricity per year.^[5] Thus, we view this market as strategically significant to Telkonet's interests.

Our energy management platform is already successfully incorporated into the energy initiatives in several military housing sites, military academies and barracks. Telkonet benefited from and continues to make use of government funding and other government contracts to provide EcoSmart for use on military bases and other facilities, helping both the DOD and the government as a whole achieve their long-term energy efficiency goals.

^[5] <http://www.brookings.edu/~media/research/files/papers/2007/8/defense%20lengyel/lengyel20070815.pdf>

Healthcare Industry

Healthcare organizations currently spend over \$6.5 billion on energy each year, a cost which continues to rise in an effort to meet patient needs.^[6] This is viewed as an emerging market for energy management systems. Although hospitals have many specific regulatory mandates, Telkonet has been working closely with operators and developers of healthcare support facilities, like medical office buildings, assisted living and other similar facilities, to integrate our EcoSmart energy management initiatives into efficiency opportunities supported by state and federal energy programs. For example, hospital energy managers can use energy efficiency strategies to offset high costs caused by growing plug loads and rising energy prices. A typical 200,000-square-foot, 50-bed hospital in the U.S. annually spends \$680,000, or roughly \$13,611 per bed on electricity and natural gas. By increasing energy efficiency, hospitals can improve the bottom line and free up funds to invest in new technologies and improve patient care.

These facilities offer a commercial environment similar to the hospitality or educational housing markets, and the increasing aging population and assisted living markets presents attractive potential for energy efficiency. This market is expected to grow rapidly over the next several years due to its energy savings capabilities and an aging population.

MDU Industry

Public housing, which are properties owned and managed by the government, is an additional emerging market for energy management solutions. The tenants occupying these properties must meet specific eligibility requirements, and their utility bills are typically paid for by government programs. Many of the ESCO clients that Telkonet supports today have dedicated teams pursuing opportunities with the owners and operators of government-subsidized housing. The EcoSmart platform is an ideal solution for conserving energy, allowing remote monitoring, and improving tenant comfort.

Competition for Markets

We currently compete primarily within commercial and industrial markets, including the hospitality, education, healthcare, governmental and MDU sectors. Within each target market, we offer savings through our intelligent automation platform. Our products offer significant competitive and complementary benefits when compared with alternative offerings including Building Automation Systems (“BAS”) or Building Management Systems (“BMS”), static temperature occupancy-based systems, scheduling/programmable thermostats and high-efficiency HVAC systems.

We participate in a relatively small competitive field within the hospitality industry, with the majority of the energy management sales handled by fewer than seven manufacturers. The key competitors in the market segment are Inncom by Honeywell and Schneider Electric, with each offering some level of comparable products to our standalone and/or networked products. Telkonet leverages the above-mentioned competitive advantages to successfully compete in these spaces and win business.

The educational space is new to adopt occupancy-based controls. The EcoSmart Platform has been introduced for use within student dormitories, which traditionally had few, if any, controls. More recently we’ve also been requested to install our products into classrooms, which traditionally have been an environment for BAS/BMS. Since the dormitory environment is very similar to the hospitality market, we believe we offer similarly-scaled energy savings. Since the market is still in its infancy, very few comparable offerings have entered the market but competitors within the hospitality segment are beginning to respond. Again, our key differentiators allow us to compete and win business in this space.

The healthcare and governmental markets are very similar in scope, relative to energy management systems. A key differentiator in these environments is the specific implementation being considered. Each market utilizes BAS/BMS for wide scale energy management initiatives. When addressing housing environments, including elderly care and assisted living facilities and military dormitories or barracks, Telkonet’s EcoSmart Platform is able to provide increased energy savings and efficiency. Competitors operating in the BAS/BMS space include Honeywell, Schneider Electric, Johnson Controls, Siemens, Trane and others, many of whom Telkonet partners with to provide a comprehensive and integrated energy management solution to effectively address energy efficiency opportunities in all types of facilities. The MDU market is split into two distinct categories, public and upscale residential housing. Public housing benefits similarly to hospitality and educational housing where intelligent, occupancy-based automation reduces operating costs. Upscale residential facilities benefit from exclusive automation solutions and centralized data reporting resulting in maintenance efficiencies.

^[6] <https://www.energystar.gov/ia/partners/publications/pubdocs/Healthcare.pdf>

Inventory

We are dependent, in certain situations, on a limited number of vendors to provide certain inventory and components. We've not experienced significant problems or issues purchasing any essential materials, parts or components, but have experienced gross profit pressure as a result of price increases and the impact of tariffs (discussed below). We contract the majority of our inventory with ATR Manufacturing, based in China, which provides substantially all the manufacturing requirements for Telkonet's energy management platform.

Customers

We are neither limited to, nor reliant upon, a single or narrowly segmented customer base to derive our revenues. Our current primary focus is in the hospitality, educational, governmental, healthcare and MDU markets and expanding into the consumer market as part of our long term strategic growth.

For the year ended December 31, 2019, there were two customers that each represented 13% of total net revenues. For the year ended December 31, 2018, no single customer represented 10% or more of our revenues.

Intellectual Property

Telkonet has acquired certain intellectual properties, including but not limited to, Patent No. D569, 279, titled "Thermostat." Patent No. D569279 issued by the USPTO in May 2008 was granted on the ornamental design of a thermostat device and will expire in May of 2022. The expiration of this patent could allow third parties to launch competing products. While we viewed this patent as valuable, we do not view any single patent as material to the Company as a whole.

There can be no assurance that any of our current or future patent applications will be granted, or, if granted, that such patents will provide necessary protection for our technology or our product offerings, or be of commercial benefit to us.

Government Regulation

As discussed in Part I, Item IA, given we purchase the majority of our inventory from a supplier based in China, we are subject to and have been affected by the tariffs imposed by the United States Federal Government on imports of industrial sector products from China.

In addition, we are subject to regulation in the United States by the Federal Communications Commission ("FCC"). FCC rules permit the operation of unlicensed digital devices that radiate radio frequency emissions if the manufacturer complies with certain equipment authorization procedures, technical requirements, marketing restrictions and product labeling requirements.

Future products designed by us will require testing for compliance with FCC and European Commission ("EC") standards. Moreover, if in the future, the FCC or EC changes its technical requirements, further testing and/or modifications may be necessary in order to achieve compliance.

Research & Development

During the years ended December 31, 2019 and 2018, the Company spent \$1,737,385 and \$1,879,676, respectively, on research and development activities. Telkonet continues to invest in research & development to maintain and grow our competitive differentiation and customer value. Key initiatives for 2020 include: expanding our EcoTouch product line with WIFI and Bluetooth wireless capabilities; creation of a new Gateway model with cellular wireless capabilities; expanding Symphony Composer development for next generation web management Internet of Things dashboard; and expanding data analytics engine integration into Symphony platform for savings algorithm development.

Additional Information

Employees

As of March 23, 2020, we had 38 full-time employees.

Environmental Matters

We do not anticipate any material effect on our capital expenditures, earnings or competitive position due to compliance with government regulations involving environmental matters.

ITEM 1A. RISK FACTORS.

Our results of operations, financial condition and cash flows can be adversely affected by various risks. These risks include, but are not limited to, the principal factors listed below and the other matters set forth in this annual report on Form 10-K. You should carefully consider all of these risks.

Risks Relating to Our Financial Results and Need for Financing

We have a history of operating losses and an accumulated deficit and expect to continue to incur operating losses and negative operating cash flows for one year beyond the date of these financial statements, and as a result, there is substantial doubt about our ability to continue as a going concern.

Since inception through December 31, 2019, we have incurred cumulative losses of \$125,105,539 and have never generated enough funds through operations to support our business. For the year ended December 31, 2019, we had negative operating cash flows of \$1,875,846 from operations. The Company's ability to continue as a going concern is dependent upon generating profitable operations in the future and obtaining the necessary financing to meet its obligations and repay its liabilities arising from normal business operations when they come due. There can be no assurance that the Company will be able to secure such financing at commercially reasonable terms, if at all. If cash resources become insufficient to meet the Company's ongoing obligations, the Company will be required to scale back or discontinue portions of its operations or discontinue operations entirely, whereby, the Company's shareholders may lose some or all of their investment. Accordingly, and in light of the Company's condition, there is substantial doubt about the Company's ability to continue as a going concern.

We have a limited number of shares of common stock available for future issuance which could adversely affect our ability to raise capital or consummate acquisitions.

We are currently authorized to issue 190,000,000 shares of common stock under our Amended Restated and Articles of Incorporation. As of March 23, 2020, we have issued 135,990,491 shares of common stock and have approximately 8,147,955 shares of common stock committed for issuance giving effect to the assumed exercise of all outstanding warrants and options and assumed conversion of preferred stock. Due to the limited number of authorized shares available for issuance, we may not be able to raise additional equity capital or complete a merger or other business combination unless we increase the number of shares we are authorized to issue. We would need to seek stockholder approval to increase the number of our authorized shares of common stock. We can provide no assurance that we will succeed in amending our Amended and Restated Articles of Incorporation to increase the number of shares of common stock we are authorized to issue.

Our failure to comply with covenants under debt instruments could trigger prepayment obligations or other penalties.

Our failure to comply with the covenants under our debt instruments could result in an event of default, which, if not cured or waived, could result in us being required to repay these borrowings before their due date or could result in other penalties. There can be no assurance that the Company will be able to secure financing to refinance these borrowings at commercially reasonable terms, if at all. If we are unable to secure such financing and cash resources become insufficient to meet the Company's ongoing obligations, the Company will be required to scale back or discontinue portions of its operations or discontinue operations entirely, whereby, the Company's shareholders may lose some or all of their investment.

If we fail to remain current on our reporting requirements, we could be removed from the OTC Bulletin Board, which would limit the ability of broker-dealers to sell our securities and the ability of stockholders to sell their securities in the secondary market.

Companies trading on the OTC Bulletin Board, such as us, must be reporting issuers under Section 12 of the Securities Exchange Act of 1934, as amended, (the "Exchange Act"), and must be current in their reports under Section 13 of the Exchange Act in order to maintain price quotation privileges on the OTC Bulletin Board. If we fail to remain current on our reporting requirements, we could be removed from the OTC Bulletin Board. As a result, the market liquidity for our securities could be adversely affected by limiting the ability of broker-dealers to sell our securities and the ability of stockholders to sell their securities in the secondary market.

Risks Relating to the Ownership of Our Common Stock

If the Company is unable to continue as a going concern, the Company's shareholders may lose some or all of their investment.

As discussed above, we have a history of operating losses and an accumulated deficit and expect to continue to incur operating losses and negative operating cash flows for one year beyond the date of these financial statements, and as a result, there is substantial doubt about our ability to continue as a going concern. If cash resources become insufficient to meet the Company's ongoing obligations and we are unable to secure financing at commercially reasonable terms, if at all, the Company will be required to scale back or discontinue portions of its operations or discontinue operations entirely, whereby, the Company's shareholders may lose some or all of their investment.

Our common stock is thinly traded and there may not be an active trading market for our common stock.

Our common stock is currently quoted on the OTCQB, operated by the OTC Markets Group. However, there is no guarantee that our common stock will be actively traded on the OTCQB, or that the volume of trading will be sufficient to allow for timely trades. Investors may not be able to sell their shares quickly or at the latest market price if trading in our stock is not active or if trading volume is limited. In addition, if trading volume in our common stock is limited, trades of relatively small numbers of shares may have a disproportionate effect on the market price of our common stock.

The market price of our common stock has been and may continue to be volatile.

The trading price of our common stock has been and may continue to be highly volatile and could be subject to wide fluctuations in response to various factors. Some of the factors that may cause the market price of our common stock to fluctuate include:

- fluctuations in our quarterly financial and operating results or the quarterly financial results of companies perceived to be similar to us;
- changes in estimates of our financial results or recommendations by securities analysts;
- potential deterioration of investor confidence resulting from material weaknesses in our internal control over financial reporting;
- our ability to raise and generate working capital to meet our obligations in the ordinary course of business;
- changes in general economic, industry and market conditions;
- failure of any of our products to achieve or maintain market acceptance;
- changes in market valuations of similar companies;
- failure of our products to operate as advertised;
- success of competitive products;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- announcements by us or our competitors of significant products, contracts, acquisitions or strategic alliances;
- regulatory developments in the United States, foreign countries or both;
- litigation involving our Company, our general industry or both;
- additions or departures of key personnel; and
- investors' general perception of us.

In addition, if the market for technology stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition or results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to class action lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

Anti-takeover provisions in our charter documents and Utah law could discourage delay or prevent a change of control of our Company and may affect the trading price of our common stock.

We are a Utah corporation and the anti-takeover provisions of the Utah Control Shares Acquisition Act may discourage, delay or prevent a change of control by limiting the voting rights of control shares acquired in a control share acquisition. In addition, our Amended and Restated Articles of Incorporation and Bylaws may discourage, delay or prevent a change in our management or control over us that shareholders may consider favorable. Among other things, our Amended and Restated Articles of Incorporation and Bylaws:

- authorize the issuance of “blank check” preferred stock that could be issued by our board of directors in response to a takeover attempt;
- provide that vacancies on our board of directors, including newly created directorships, may be filled only by a majority vote of directors then in office, except a vacancy occurring by reason of the removal of a director without cause shall be filled by vote of the shareholders; and
- limit who may call special meetings of shareholders.

These provisions could have the effect of delaying or preventing a change of control, whether or not it is desired by, or beneficial to, our shareholders.

We do not currently intend to pay dividends on our common stock

We do not expect to pay cash dividends on our common stock. Any future dividend payments are within the absolute discretion of our board of directors and will depend on, among other things, our results of operations, working capital requirements, capital expenditure requirements, financial condition, contractual restrictions, business opportunities, anticipated cash needs, provisions of applicable law and other factors that our board of directors may deem relevant. We may not generate sufficient cash from operations in the future to pay dividends on our common stock.

Our common stock is subject to “Penny Stock” restrictions

As long as the price of our common stock remains at less than \$5 per share, we will be subject to so-called “penny stock rules” which could decrease our stock’s market liquidity. The Security and Exchange Commission (“SEC”) has adopted regulations which define a “penny stock” to include any equity security that has a market price of less than \$5 per share or an exercise price of less than \$5 per share, subject to certain exceptions. For any transaction involving a penny stock, unless exempt, the rules require the delivery to and execution by the retail customer of a written declaration of suitability relating to the penny stock, which must include disclosure of the commissions payable to both the broker/dealer and the registered representative and current quotations for the securities. Finally, the broker/dealer must send monthly statements disclosing recent price information for the penny stocks held in the account and information on the limited market in penny stocks. Those requirements could adversely affect the market liquidity of our common stock. There can be no assurance that the price of our common stock will rise above \$5 per share so as to avoid these regulations.

Further issuances of equity securities may be dilutive to current stockholders.

It is possible that we will be required to seek additional capital in the near term. This capital funding could involve one or more types of equity securities, including convertible debt, common or convertible preferred stock and warrants to acquire common or preferred stock. Such equity securities could be issued at or below the then-prevailing market price for our common stock. Any issuance of additional shares of our common stock will be dilutive to existing stockholders and could adversely affect the market price of our common stock.

The exercise of conversion rights, options and warrants outstanding and available for issuance may adversely affect the market price of our common stock.

As of December 31, 2019, we had outstanding employee options to purchase a total of 3,349,793 shares of common stock at exercise prices ranging from \$0.14 to \$1.00 per share, with a weighted average exercise price of \$0.16. As of December 31, 2019, we had warrants outstanding to purchase a total of 250,000 shares of common stock at an exercise price of \$0.20 per share. The exercise of outstanding options and warrants and the sale in the public market of the shares purchased upon such exercise could be dilutive to existing stockholders and could adversely affect the market price of our common stock.

Risks Related to Our Business

We face risks related to global health epidemics, including COVID-19, which could adversely affect our business and results of operations.

On January 30, 2020 the World Health Organization (“WHO”) announced a global health emergency because of a new strain of novel coronavirus originating in Wuhan, China (the “COVID-19 outbreak”) and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the World Health Organization declared the COVID-19 outbreak as a pandemic, which continues to spread throughout the world. The spread of this pandemic has caused significant volatility and uncertainty in U.S. and international markets. This could result in an economic downturn or rescission reducing the demand for our products and/or causing customers to be unable to meet payment obligations to the Company. The Company’s largest industry, hospitality, has already been impacted with restrictions on air travel, heightened border scrutiny and event cancellations. The Company has been informed by some clientele that planned capital expenditures have been suspended until further notice. Further, the pandemic could adversely affect our supply chain and the production capabilities of our primary product supplier located in China, due to quarantines, worker absenteeism and/or facility closures. If any of our supply chain phases were interrupted or terminated, we could experience delays in our project fulfillment process. Delays could result in increased fulfillment costs, customer pricing concessions or overall project cancellations. The occurrence of one or more of these items could have a material adverse effect on our business, liquidity, financial condition, and/or results of operations.

Due to the speed with which the situation is developing and the uncertainty of its duration and the timing of recovery, we are not able at this time to predict the extent to which the COVID-19 pandemic may impact our financial or operational results.

New tariffs and evolving trade policy between the United States and China may have a material adverse effect on our business.

During 2018, the United States Federal Government imposed significant tariffs on imports from numerous countries, including China. Subsequent to this, the Office of the United States Trade Representative (“USTR”) announced an initial proposed list of imports from China that could be subject to additional tariffs. The list of imports for which Customs and Border Protection began collecting additional duties during July 2018, focuses on the industrial sector. The Company’s main supplier, accounting for approximately 84% of total purchases, is located in China. The products that the Company purchases from the supplier are subject to up to 25% tariffs. As a result of the tariffs, our cost of sales has increased.

The current administration, along with Congress, has created significant uncertainty about the future relationship between the United States and other countries with respect to the trade policies, treaties, taxes, government regulations and tariffs that would be applicable. It is unclear what changes might be considered or implemented and what response to any such changes may be by the governments of other countries. These changes have created significant uncertainty about the future relationship between the United States and China, as well as other countries, including with respect to the trade policies, treaties, government regulations and tariffs that could apply to trade between the United States and other nations. If significant tariffs or other restrictions are placed on Chinese imports or any related counter-measures are taken by China, our revenue and results of operations may be materially harmed. Even in the absence of further tariffs, the related uncertainty and the market's fear of an escalating trade war might create forecasting difficulties for us and cause our customers and business partners to place fewer orders for our products and services, which could have a material adverse effect on our business, liquidity, financial condition, and/or results of operations.

These developments, or the perception that any of them could occur, may have a material adverse effect on global economic conditions and the stability of global financial markets, and may significantly reduce global trade and, in particular, trade between these nations and the United States. Any of these factors could depress economic activity and restrict our access to suppliers or customers and have a material adverse effect on our business, financial condition and results of operations and affect our strategy in China and elsewhere around the world. Given the relatively fluid regulatory environment in China and the United States and uncertainty how the U.S. Administration or foreign governments will act with respect to tariffs, international trade agreements and policies, a trade war, further governmental action related to tariffs or international trade policies, or additional tax or other regulatory changes in the future could directly and adversely impact our financial results and results of operations.

We rely on a limited number of third party suppliers. If these companies fail to perform or experience delays, shortages, or increased demand for their products or services, we may face shortages, increased costs, and may be required to suspend deployment of our products and services.

We depend on a limited number of third party suppliers to provide the components and the equipment required to deliver our solutions, with purchases from one supplier comprising approximately 84% of total purchases for the year ended December 31, 2019. If these providers fail to perform their obligations under our agreements with them or we are unable to renew these agreements, we may be forced to suspend the sale and deployment of our products and services and enrollment of new customers, which would have an adverse effect on our business, prospects, financial condition and operating results.

The industry within which we operate is intensely competitive and rapidly evolving.

We operate in a highly competitive, quickly changing environment, and our future success will depend on our ability to develop and introduce new products and product enhancements that achieve broad market acceptance in the markets within which we compete. We will also need to respond effectively to new product announcements by our competitors by quickly developing and introducing competitive products.

Delays in product development and introduction could result in:

- loss of or delay in revenue and loss of market share;
- negative publicity and damage to our reputation and the reputation of our product offerings; and
- decline in the average selling price of our products.

We have identified material weaknesses in our internal controls as of December 31, 2019 that, if not properly remediated, could result in material misstatements in our financial statements.

Based on an evaluation of our disclosure of internal controls and procedures as of December 31, 2019, our management has concluded that, as of such date, there were material weaknesses in our internal control over financial reporting related to a lack of segregation of duties due to the limited size of the Company's accounting department, a failure to implement adequate internal control over financial reporting including in our IT general control environment and the need for a stronger internal control environment particularly in our financial reporting and close process. A material weakness is a control deficiency, or a combination of control deficiencies, in internal control over financial reporting, such that there is a more than a remote likelihood that a material misstatement of annual or interim financial statements would not be prevented or detected. As disclosed in Item 9A of Part II of this report, because of the material weaknesses identified by the Company, our consolidated financial statements may contain material misstatements that would require restatement of the Company's financial results in this report. Management of the Company believes that these material weaknesses are due to the small size of the Company's accounting staff. The small size of the Company's accounting staff may prevent adequate controls in the future, such as segregation of duties, due to the cost/benefit of such remediation. At present, the Company does not expect to hire additional personnel to remediate these control deficiencies in the near future. We are reviewing other potential actions to remediate the identified material weaknesses.

Until and if these material weaknesses in our internal control over financial reporting are remediated, there is reasonable possibility that material misstatements of our annual or interim consolidated financial statements could occur and not be prevented or detected by our internal controls in a timely manner. Material misstatements in our financial statements could result in litigation or regulatory enforcement actions, which would require additional financial and management resources; loss of investor confidence; and delays in filing required financial disclosures, one or more of which could have a material adverse effect on our business and financial condition. The Company believes the consolidated financial statements as of December 31, 2019 and 2018 are free of material misstatements.

Government regulation of our products could impair our ability to sell such products in certain markets.

The rules of the FCC permit the operation of unlicensed digital devices that radiate radio frequency emissions if the manufacturer complies with certain equipment authorization procedures, technical requirements, marketing restrictions and product labeling requirements. Differing technical requirements apply to “Class A” devices intended for use in commercial settings, and “Class B” devices intended for residential use to which more stringent standards apply. An independent, FCC-certified testing lab has verified that our product suite complies with the FCC technical requirements for Class A and Class B digital devices. No further testing of these devices is required, and the devices may be manufactured and marketed for commercial and residential use. Additional devices designed by us for commercial and residential use will be subject to the FCC rules for unlicensed digital devices. Moreover, if in the future, the FCC changes its technical requirements for unlicensed digital devices, further testing and/or modifications of devices may be necessary. Failure to comply with any FCC technical requirements could impair our ability to sell our products in certain markets and could have a negative impact on our business and results of operations.

Products sold by our competitors could become more popular than our products or render our products obsolete.

The market for our products and services is highly competitive. Some of our competitors have longer operating histories, greater name recognition and substantially greater financial, technical, sales, marketing and other resources. These competitors may, among other things, undertake more extensive marketing campaigns, adopt more aggressive pricing policies, obtain more favorable pricing from suppliers and manufacturers and exert more influence on the sales channel than we can. As a result, we may not be able to compete successfully with these competitors, and these competitors may develop or market technologies and products that are more widely accepted than those being developed by us or that would render our products obsolete or noncompetitive. We anticipate that competitors will also intensify their efforts to penetrate our target markets. These competitors may have more advanced technology, more extensive distribution channels, stronger brand names, bigger promotional budgets and larger customer bases than we do. These companies could devote more capital resources to develop, manufacture and market competing products than we could. If any of these companies are successful in competing against us, our sales could decline, our margins could be negatively impacted, and we could lose market share, any of which could seriously harm our business, results of operations, and prospects.

We may incur substantial damages due to litigation.

We cannot be certain that our products do not and will not infringe issued patents or other intellectual property rights of others. If it were determined that our products infringe the intellectual property rights of another, we could be required to pay substantial damages or be enjoined from licensing or using the infringing products or technology. Additionally, if it were determined that our products infringe the intellectual property rights of others, we would need to obtain licenses from these parties or substantially re-engineer our products in order to avoid infringement. We might not be able to obtain the necessary licenses on acceptable terms or at all, or to re-engineer our products successfully. Any of the foregoing could cause us to incur significant costs and prevent us from selling our products.

We depend on a small team of senior management and may have difficulty attracting and retaining additional personnel.

Our future success will depend in large part upon the continued services and performance of senior management and other key personnel. If we lose the services of any member of our senior management team, our overall operations could be materially and adversely affected. In addition, our future success will depend on our ability to identify, attract, hire, train, retain and motivate other highly skilled technical, managerial, marketing, purchasing and customer service personnel when they are needed. Competition for these individuals is intense. We cannot ensure that we will be able to successfully attract, integrate or retain sufficiently qualified personnel when the need arises. Any failure to attract and retain the necessary technical, managerial, marketing, purchasing and customer service personnel could have a negative effect on our financial condition and results of operations.

We may be affected if the United States participates in wars or other military action or by international terrorism.

Involvement in a war or other military action or acts of terrorism may cause significant disruption to commerce throughout the world. To the extent that such disruptions result in (i) delays or cancellations of customer orders, (ii) a general decrease in consumer spending on information technology, (iii) our inability to effectively market and distribute our services or products or (iv) our inability to access capital markets, our business and results of operations could be materially and adversely affected. We are unable to predict whether the involvement in a war or other military action will result in any long-term commercial disruptions or if such involvement or responses will have any long-term material adverse effect on our business, results of operations, or financial condition.

Cyber security risks and cyber incidents could adversely affect our business and disrupt operations.

Cyber incidents can result from deliberate attacks or unintentional events. These incidents can include, but are not limited to, gaining unauthorized access to digital systems for purposes of misappropriating assets or sensitive information, corrupting data, or causing operational disruption. The result of these incidents could include, but are not limited to, disrupted operations, misstated financial data, liability for stolen assets or information, increased cyber-security protection costs, litigation and reputational damage adversely affecting customer or investor confidence. We have implemented systems and processes to focus on identification, prevention, mitigation and resolution. However, these measures cannot provide absolute security, and our systems may be vulnerable to cyber-security breaches such as viruses, hacking, and similar disruptions from unauthorized intrusions. In addition, we rely on third party service providers to perform certain services, such as payroll and tax services. Any failure of our systems or third party systems may compromise our sensitive information and/or personally identifiable information of our employees. While we have secured cyber insurance to potentially cover certain risks associated with cyber incidents, there can be no assurance the insurance will be sufficient to cover any such liability.

Our exposure to the credit risk of our customers and suppliers may adversely affect our financial results.

We sell our products to customers that have in the past, and may in the future, experience financial difficulties. If our customers experience financial difficulties, we could have difficulty recovering amounts owed to us from these customers. While we perform credit evaluations and adjust credit limits based upon each customer's payment history and credit worthiness, such programs may not be effective in reducing our exposure to credit risk. We evaluate the collectability of accounts receivable, and based on this evaluation make adjustments to the allowance for doubtful accounts for expected losses. Actual bad debt write-offs may differ from our estimates, which may have a material adverse effect on our financial condition, operating results and cash flows.

Our suppliers may also experience financial difficulties, which could result in our having difficulty sourcing the materials and components we use in producing our products and providing our services. This risk is increased given we depend on a limited number of third party suppliers to provide the components and the equipment required to deliver our solutions, with purchases from one supplier comprising approximately 84% of total purchases for the year ended December 31, 2019. If we encounter such difficulties, we may not be able to produce our products for our customers in a timely fashion which could have an adverse effect on our results of operations, financial condition and cash flows.

Changes in the economy and credit markets may adversely affect our future results of operations.

Our operations and performance depend to some degree on general economic conditions and their impact on our customers' finances and purchase decisions. As a result of economic events, potential customers may elect to defer purchases of capital equipment items, such as the products we manufacture and supply. Additionally, the credit markets and the financial services industry are subject to change. While the ultimate outcome of these events cannot be predicted, it may have a material adverse effect on our customers' ability to fund their operations thus adversely impacting their ability to purchase our products or to pay for our products on a timely basis, if at all. These and other economic factors could have a material adverse effect on demand for our products, the collection of payments for our products and on our financial condition and operating results.

We may not be able to obtain payment and performance bonds, which could have a material adverse effect on our business.

Our ability to deploy our EcoSmart Suite of products into the energy management initiatives in federally funded or assisted projects may rely on our ability to obtain payment and performance bonds which may be an essential element to work orders for the installation of our products and services. If we are unable to obtain payment and performance bonds in a timely fashion as required by an applicable work order, we may not be entitled to payment under the work order until such bonds have been provided or until such a requirement is expressly waived. In addition, any delays due to a failure to furnish bonds may not entitle us to a price increase for the work or an extension of time to complete the work and may entitle the other party to terminate our work order without liability and to indemnify such party from damages suffered as a result of our failure to deliver the bonds and the termination of the work order. As a result, the failure to obtain bonds where required could negatively impact our business, results of operations, and prospects.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

In October 2013, the Company entered into a lease agreement for 6,362 square feet of commercial office space in Waukesha, Wisconsin for its corporate headquarters with a term expiration of April 30, 2021. On April 7, 2017, the Company executed an amendment to the existing lease to expand another 3,982 square feet, bringing the total leased space to 10,344 square feet, and extend the lease term from May 1, 2021 to April 30, 2026. The commencement date for this amendment was July 15, 2017.

In January 2016, the Company entered into a lease agreement for 2,237 square feet of commercial office space in Germantown, Maryland for its Maryland employees. In September 2018, the Company entered into a third amendment to the lease agreement extending the lease through the end of January 2022.

In May 2017, the Company entered into a lease agreement for 5,838 square feet of floor space in Waukesha, Wisconsin for its inventory warehousing operations. The Waukesha lease expires in May 2024.

ITEM 3. LEGAL PROCEEDINGS.

The Company is subject to legal proceedings and claims which arise in the ordinary course of its business. Although occasional adverse decisions or settlements may occur, the Company believes that the final disposition of such matters should not have a material adverse effect on its financial position, results of operations or liquidity.

ITEM 4. MINE SAFETY DISCLOSURES.

None.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Our common stock is currently quoted on the OTC Bulletin Board under the symbol "TKOI." The OTC Bulletin Board is not a stock exchange and any over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

Record Holders

As of March 23, 2020, we had 209 holders of record of our common stock and 135,990,491 shares of our common stock issued and outstanding.

Dividend Policy

The Company has never paid dividends on its common stock and does not anticipate paying dividends in the foreseeable future. It is also subject to certain contractual restrictions on paying dividends on its common stock under the terms of its Series A and B preferred stock.

Securities Authorized for Issuance Under Equity Compensation Plans

See Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters for information about securities authorized for issuance under the Company's equity compensation plans.

Unregistered Sales of Equity Securities and Use of Proceeds

None.

Issuer Purchases of Equity Securities

None.

ITEM 6. SELECTED FINANCIAL DATA

This item is not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the accompanying financial statements and related notes thereto.

Recent Developments

On January 30, 2020 the World Health Organization ("WHO") announced a global health emergency because of a new strain of a novel coronavirus in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of operations. In March 2020, the World Health Organization classified the COVID-19 outbreak a pandemic, based on the rapid increase in exposure globally. The spread of the COVID-19 outbreak has caused significant volatility and uncertainty in U.S. and international markets. The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such it is uncertain as to the full magnitude that the COVID-19 outbreak will have on the Company's financial condition, liquidity, and future results of operations.

The COVID-19 outbreak has resulted in and could continue to result in reduced demand for our products and/or causing customers to be unable to meet payment obligations to the Company. The industries that the Company operates in have already been impacted with shelter-in-place directives, school closures, visitor restrictions, travel restrictions, heightened border scrutiny and event cancellations which will materially affect sales levels for fiscal year 2020 and the Company's overall liquidity. The Company has been informed by some clientele that planned capital expenditures have been suspended until further notice.

The COVID-19 outbreak could adversely affect our supply chain and production capabilities of our primary product supplier located in China, due to quarantines, worker absenteeism, facility closures, and/or increased international trade restrictions or regulations. If any of our supply chain phases were interrupted or terminated, we could experience delays in our project fulfillment process. Delays could result in increased fulfillment costs, customer pricing concessions, or overall project cancellations.

The Company is dependent on its workforce to deliver our products and services. Developments such as social distancing, shelter-in-place directives, furloughs, worker absenteeism, and travel restrictions will impact the Company's ability to deploy its workforce effectively. While expected to be temporary, prolonged workforce disruptions will negatively impact sales levels for fiscal year 2020 and the Company's overall liquidity.

In response to the continuing uncertainty resulting from a novel coronavirus, we have implemented and are continuing to review strategic cost reduction strategies across all functional areas. At this time, the disruption is expected to be temporary; however, the length or severity of this pandemic is unknown. Management is actively monitoring the impact of the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. While we expect this disruption to have a material adverse impact our results of operations, financial condition and cash flows for the year 2020, the Company is unable to reasonably determine the impact at this time.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Company to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. On an ongoing basis, the Company evaluates significant estimates used in preparing its consolidated financial statements including those related to revenue recognition and allowances for uncollectible accounts receivable, inventory obsolescence, recovery of long-lived assets, income tax provisions and related valuation allowance, stock-based compensation, and contingencies. The Company bases its estimates on historical experience, underlying run rates and various other assumptions that the Company believes to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ from these estimates. The following are critical judgments, assumptions, and estimates used in the preparation of the consolidated financial statements.

Revenue from Contracts with Customers

Accounting Standards Codification Topic 606, Revenue from Contracts with Customers ("ASC 606, the Standard") supersedes nearly all legacy revenue recognition guidance. ASC 606, the Standard outlines a comprehensive five-step revenue recognition model based on the principle that an entity should recognize revenue based on when it satisfies its performance obligations by transferring control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for said goods or services.

Identify the customer contracts

The Company accounts for a customer contract under ASC 606 when the contract is legally enforceable. A contract is legally enforceable when all of the following criteria are met: (1) the contract has been approved by the Company and the customer and both parties are committed to perform their respective obligations, (2) the Company can identify each party's rights regarding goods or services transferred, (3) the Company can identify payment terms for goods or services transferred, (4) the contract has commercial substance, and (5) collectability of all the consideration to which the Company is entitled in exchange for the goods or services transferred is probable.

A contract does not exist if each party to the contract has the unilateral right to terminate a wholly unperformed contract without compensating the other party (or parties). Nearly all of the Company's contracts do not contain such mutual termination rights for convenience. All contracts are in written form.

Identify the performance obligations

The Company will enter into product only contracts that contain a single performance obligation related to the transfer of EcoSmart products to a customer.

The Company will also enter into certain customer contracts that encompass product and installation services, referred to as "turnkey" solutions. These contracts ultimately provide the customer with a solution that enhances the functionality of the customer's existing equipment. For this reason, the Company has determined that the product and installation services are not separately identifiable performance obligations, but in essence represent one, combined performance obligation ("turnkey").

The Company also offers post-installation support services to customers. Support services are considered a separate performance obligation.

Determine the transaction price

The Company generally enters into contracts containing fixed prices. It is not customary for the Company to include contract terms that would result in variable consideration. In the rare situation that a contract does include this type of provision, it is not expected to result in a material adjustment to the transaction price. The Company regularly extends pricing discounts; however, they are negotiated up front and adjust the fixed transaction price set out in the contract.

Customer contracts will typically contain upfront deposits that will be applied against future invoices, as well as customer retainage. The intent of any required deposit or retainage is to ensure that the obligations of either party are honored and follow customary industry practices. In addition, the Company will typically be paid in advance at the beginning of any support contracts, consistent with industry practices. None of these payment provisions are intended to represent significant implicit financing. The Company's standard payment terms are thirty days from invoice date. Products are fully refundable when returned in their original packaging without damage or defacing less a restocking fee. Historical returns have shown to be immaterial. The Company offers a standard one-year assurance warranty. However customers can purchase an extended warranty. Under the new standard, extended warranties are accounted for as a service warranty, requiring the revenue to be recognized over the extended service periods. Contracts involving an extended warranty are immaterial and will continue to be combined with support revenue and recognized on a straight-line basis over the support revenue term.

Allocate the transaction price to the performance obligations

Revenues from customer contracts are allocated to the separate performance obligations based on their relative stand-alone selling price ("SSP") at contract inception. The SSP is the price at which the Company would sell a promised good or service separately. The best evidence of an SSP is the observable price of a good or service when the entity sells that good or service separately in similar circumstances and to similar customers. However, turnkey solutions are sold for a broad range of amounts resulting from, but not limited to, tiered discounting for value added resellers ("VAR") based upon committed volumes and other economic factors. Due to the high variability of our pricing, the Company cannot establish a reliable SSP using observable data. Accordingly, the Company uses the residual approach to allocate the transaction price to performance obligations related to its turnkey solutions. When support services are not included within the turnkey solution, the residual method is not utilized and no allocation of the transaction price to the performance obligation is necessary.

All support service agreements, whether single or multi-year terms, automatically renew for one-year terms at a suggested retail price ("SRP"). Support service renewals are consistently priced and therefore would support the use of SRP as the best estimate of an SSP for such performance obligations.

Revenue Recognition

The Company recognizes revenues from product only sales at a point in time, when control over the product has transferred to the customer. As the Company's principal terms of sale are FOB shipping point, the Company primarily transfers control and records revenue for product only sales upon shipment.

A typical turnkey project involves the installation and integration of 200-300 rooms in a customer-controlled facility and usually takes sixty days to complete. Since control over goods and services transfers to a customer once a room is installed, the Company recognizes revenue for turnkey solutions over time. The Company uses an outputs measure based on the number of rooms installed to recognize revenues from turnkey solutions.

Revenues from support services are recognized over time, in even daily increments over the term of the contract, and are presented as "Recurring Revenue" in the Statement of Operations.

Contracts are billed in accordance with the terms and conditions, either at periodic intervals or upon substantial completion. This can result in billing occurring subsequent to revenue recognition, resulting in contract assets. Contract assets are presented as current assets in the Condensed Consolidated Balance Sheet.

Contract liabilities include monthly support service fees, customer deposits, and billings in advance of revenue recognition. The long term portion of these liability balances represent the amount of revenues that will be recognized after December 31, 2020.

Contract Fulfillment Cost

The Company recognizes related costs of the contract over time in relation to the revenue recognition. Costs included within the projects relate to the cost of material, direct labor and costs of outside services utilized to complete projects. These are presented as "Contract assets" in the consolidated balance sheets.

Transition

The Company adopted ASC 606 using a modified retrospective approach to all contracts not completed as of January 1, 2018. Results for reporting periods beginning January 1, 2018 are presented under ASC 606, while prior period amounts were not adjusted and continue to be reported in accordance with the Company's historic accounting under Topic 605, Revenue Recognition. The Company recorded a net decrease to beginning retained earnings of \$0.43 million as of January 1, 2018 due to the cumulative impact of adopting ASC 606. The impact to beginning retained earnings was primarily driven by the deferral of revenue for unfulfilled performance obligations related to the Company's turnkey solutions.

Accounts Receivable

Accounts receivable are uncollateralized customer obligations due under normal trade terms. The Company records allowances for doubtful accounts based on customer-specific analysis and general matters such as current assessment of past due balances and economic conditions. The Company writes off accounts receivable when they become uncollectible. Management identifies a delinquent customer based upon the delinquent payment status of an outstanding invoice, generally greater than 30 days past due date. The delinquent account designation does not trigger an accounting transaction until such time the account is deemed uncollectible. The allowance for doubtful accounts is determined by examining the reserve history and any outstanding invoices that are over 30 days past due as of the end of the reporting period. Accounts are deemed uncollectible on a case-by-case basis, at management's discretion based upon an examination of the communication with the delinquent customer and payment history. Typically, accounts are only escalated to "uncollectible" status after multiple attempts at collection have proven unsuccessful.

Inventory Obsolescence

Inventories consist of thermostats, sensors and controllers for Telkonet's EcoSmart product platform. These inventories are purchased for resale and do not include manufacturing labor and overhead. Inventories are stated at the lower of cost or net realizable value determined by the first in, first out (FIFO) method. The Company's inventories are subject to technological obsolescence. Management evaluates the net realizable value of its inventories on a quarterly basis and when it is determined that the Company's carrying cost of such excess and obsolete inventories cannot be recovered in full, a charge is taken against income for the difference between the carrying cost and the estimated realizable amount.

Guarantees and Product Warranties

The Company records a liability for potential warranty claims. The amount of the liability is based on the trend in the historical ratio of claims to sales. The products sold are generally covered by a warranty for a period of one year. In the event the Company determines that its current or future product repair and replacement costs exceed its estimates, an adjustment to these reserves would be charged to earnings in the period such determination is made. During the years ended December 31, 2019 and 2018, the Company experienced approximately between 1% and 3% of returns related to product warranties. As of December 31, 2019 and 2018, the Company recorded warranty liabilities in the amount of \$58,791 and \$46,103, respectively, using this experience factor range.

Income Taxes

The Company accounts for income taxes in accordance with ASC 740-10. Under this method, deferred income taxes (when required) are provided based on the difference between the financial reporting and income tax bases of assets and liabilities and net operating losses at the statutory rates enacted for future periods. The Company has a policy of establishing a valuation allowance when it is more likely than not that the Company will not realize the benefits of its deferred income tax assets in the future. For the year ended December 31, 2019, the Company has recorded all known and estimable impacts of the Tax Act that are effective for 2019.

Stock Based Compensation

We account for our stock based awards in accordance with ASC 718, which requires a fair value measurement and recognition of compensation expense for all share-based payment awards made to our employees and directors, including employee stock options and restricted stock awards.

We estimate the fair value of stock options granted using the Black-Scholes valuation model. This model requires us to make estimates and assumptions including, among other things, estimates regarding the length of time an employee will retain vested stock options before exercising them and the estimated volatility of our common stock price. The fair value is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. Changes in these estimates and assumptions can materially affect the determination of the fair value of stock-based compensation and consequently, the related amount recognized in our consolidated statements of operations.

Recovery of Long -Lived Assets

We review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable in accordance with ASC 360-10. Recoverability is measured by comparison of the carrying amount to the future net undiscounted cash flows which the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds its fair value.

Sales Tax

Unless provided with a resale or tax exemption certificate, the Company assesses and collects sales tax on sales transactions and records the amount as a liability. It is recognized as a liability until remitted to the applicable state. Total revenues do not include sales tax as the Company is considered a pass through conduit for collecting and remitting sales taxes.

Results of Operations

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Revenues

The table below outlines our product versus recurring revenues from operations for comparable periods:

	Year Ended December 31,					
	2019		2018		Variance	
Product	\$ 11,212,854	94%	\$ 7,616,415	90%	\$ 3,596,439	47%
Recurring	769,342	6%	815,564	10%	(46,222)	(6%)
Total	<u>\$ 11,982,196</u>	100%	<u>\$ 8,431,979</u>	100%	<u>\$ 3,550,217</u>	42%

Product Revenue

Product revenue principally arises from the sale and installation of the EcoSmart energy management platform. The EcoSmart Suite of products consists of thermostats, sensors, controllers, wireless networking products, switches, outlets and a control platform.

For the year ended December 31, 2019, product revenues increased by 47% or \$3.6 million when compared to the prior year. Increases are primarily attributable to volume generated from value added resellers and distribution partners. Product revenues derived from value added resellers and distribution partners were \$8.57 million for the year ended December 31, 2019, an increase of 39% compared to the prior year period. In addition, beginning in the third quarter of 2019, the Company began implementing portfolio pricing increases, which under normal circumstances would be expected to positively impact product revenue, but given the COVID-19 pandemic, the impact of these price increases may be offset by reduced demand for our products in the near term.

For the year ended December 31, 2019, the increase in product revenues over the prior year period was due to hospitality revenues increasing \$2.16 million to \$8.57 million, government revenues increasing \$0.96 million to \$1.04 million, education revenues increasing \$0.39 million to \$1.04 million and MDU revenues increasing \$0.09 million to \$0.56 million. For the year ended December 31, 2019, actual product revenues increased by \$3.98 million while installation revenues decreased by \$0.33 million. For the year ended December 31, 2019, international revenues grew \$1.77 million to \$1.92 million when compared to the prior year period. The increase was primarily driven by two customers.

Backlogs were approximately \$2.71 million and \$3.40 million at December 31, 2019 and 2018, respectively.

Recurring Revenue

Recurring revenue is attributed to our call center support services. The Company recognizes revenue ratably over the service period for monthly support revenues and defers revenue for annual support services over the term of the service period. Recurring revenue consists of Telkonet's EcoCare service and support program.

For the year ended December 31, 2019, recurring revenue decreased by 6% when compared to the prior year period. The decrease was related to decreased unit sales of call center support services.

Cost of Sales

The tables below outline product versus recurring cost of sales, along with respective amounts of those costs as a percentage of revenue for the comparable periods:

	Year ended December 31,					
	2019		2018		Variance	
Product	\$ 6,703,494	60%	\$ 4,392,643	58%	\$ 2,310,851	53%
Recurring	301,500	39%	269,443	33%	32,057	12%
Total	<u>\$ 7,004,994</u>	58%	<u>\$ 4,662,086</u>	55%	<u>\$ 2,342,908</u>	50%

Costs of Product Revenue

Costs of product revenue include materials and installation labor related to EcoSmart technology. For the year ended December 31, 2019, product costs increased 53% compared to the prior year period. The variance was primarily attributable to an increase of \$1.21 million in material costs, an increase of \$0.49 million in logistical expenses, inclusive of import tariffs and an increase of \$0.44 million in the use of installation subcontractors. Material costs as a percentage of product revenues were 42% for the year ended December 31, 2019, a decrease of 8%, compared to the prior year period.

Costs of Recurring Revenue

Recurring costs are comprised primarily of call center support labor. For the year ended December 31, 2019, recurring costs increased by 12% when compared to the prior year period. The variance was primarily due to increases in salary and recruiting efforts offset by a decrease in temporary staffing.

Gross Profit

The tables below outline product versus recurring gross profit, along with respective actual gross profit percentages for the comparable periods:

	Year ended December 31,					
	2019		2018		Variance	
Product	\$ 4,509,360	40%	\$ 3,223,772	42%	\$ 1,285,588	40%
Recurring	467,842	61%	546,121	67%	(78,279)	(14%)
Total	<u>\$ 4,977,202</u>	42%	<u>\$ 3,769,893</u>	45%	<u>\$ 1,207,309</u>	32%

Gross Profit on Product Revenue

Gross profit for the year ended December 31, 2019 increased 40% when compared to the prior year period.

For the year ended December 31, 2019, the actual gross profit percentage decreased 2% to 40%. Contributing to the decrease were increases in logistical expenses and the use of installation subcontractors, partially offset by a decrease in material costs as a percentage of product revenues. Tariffs imposed on Chinese imports resulted in an adverse impact of approximately 6% on the actual gross profit percentage for the year ended December 31, 2019, compared to approximately 2% for the year ended December 31, 2018.

Gross Profit on Recurring Revenue

Gross profit for the year ended December 31, 2019 decreased 14% when compared to the prior year period. The decrease was a combination of decreased unit sales of call center support services and increased salaries. For the year ended December 31, 2019, the actual gross profit percentage decreased 6% when compared to the prior year period.

Operating Expenses

The tables below outline operating expenses for the comparable periods, along with percentage change:

	Year ended December 31,			
	2019	2018	Variance	
Total	\$ 6,958,559	\$ 6,790,642	\$ 167,917	2%

The Company's operating expenses are comprised of research and development, selling, general and administrative expenses and depreciation and amortization expense. During the year ended December 31, 2019, operating expenses increased by 2% when compared to the prior year as outlined below.

Research and Development

	Year ended December 31,			
	2019	2018	Variance	
Total	\$ 1,737,385	\$ 1,879,676	\$ (142,291)	(8%)

Research and development costs are related to both present and future products and are expensed in the period incurred. Current research and development costs are associated with product development and integration. For the year ended December 31, 2019, research and development costs decreased by 8% when compared to the prior year period. The variance is attributable to decreases in expenses incurred with third-party consultants and salary expense, partially offset by increases in travel and certification expenses.

Selling, General and Administrative Expenses

	Year ended December 31,			
	2019	2018	Variance	
Total	\$ 5,155,092	\$ 4,843,859	\$ 311,233	6%

For the year ended December 31, 2019, selling, general and administrative expenses increased by 6% compared to the prior year period. The variance is attributable to a \$0.14 million increase in sales commissions, a \$0.17 million increase in audit and legal fees, a \$0.09 million increase in salary expense offset by a \$0.05 million decrease in advertising and a \$0.04 million decrease in computer software expenditures.

Non-GAAP Financial Measures

Management believes that certain non-GAAP financial measures may be useful to investors in certain instances to provide additional meaningful comparisons between current results and results in prior operating periods. Adjusted earnings before interest, taxes, depreciation, amortization and stock-based compensation (“Adjusted EBITDA”) is a metric used by management and frequently used by the financial community. Adjusted EBITDA from operations provides insight into an organization’s operating trends and facilitates comparisons between peer companies, since interest, taxes, depreciation, amortization and stock-based compensation can differ greatly between organizations as a result of differing capital structures and tax strategies. Adjusted EBITDA from operations is one of the measures used for determining our debt covenant compliance. Adjusted EBITDA from operations excludes certain items that are unusual in nature or not comparable from period to period. While management believes that non-GAAP measurements are useful supplemental information, such adjusted results are not intended to replace our GAAP financial results. Adjusted EBITDA from operations is not, and should not be considered, an alternative to net income (loss), operating income (loss), or any other measure for determining operating performance or liquidity, as determined under accounting principles generally accepted in the United States (GAAP). In assessing the overall health of its business for the years ended December 31, 2019 and 2018, the Company excluded items in the following general categories described below:

- Stock-based compensation: The Company believes that because of the variety of equity awards used by companies, varying methodologies for determining stock-based compensation and the assumptions and estimates involved in those determinations, the exclusion of non-cash stock-based compensation enhances the ability of management and investors to understand the impact of non-cash stock-based compensation on our operating results. Further, the Company believes that excluding stock-based compensation expense allows for a more transparent comparison of its financial results to the previous year.

RECONCILIATION OF NET LOSS TO ADJUSTED EBITDA FOR THE YEARS ENDED DECEMBER 31,

	2019	2018
Net loss	\$ (1,934,133)	\$ (3,016,750)
Interest (income) expense, net	53,139	(13,622)
Income tax provision (benefit)	(100,363)	9,623
Depreciation and amortization	66,082	67,107
EBITDA	(1,915,275)	(2,953,642)
Adjustments:		
Stock-based compensation	7,261	6,404
Adjusted EBITDA	<u>\$ (1,908,014)</u>	<u>\$ (2,947,238)</u>

Liquidity and Capital Resources

For the year ended December 31, 2019, the Company reported a net loss of \$1,934,133 and had cash used in operating activities of \$1,875,846, and ended the year with an accumulated deficit of \$125,105,539 and total current assets in excess of current liabilities of \$4,187,449. At December 31, 2019, the Company had \$3,300,600 of cash and approximately \$424,000 of availability on its credit facility. The credit facility is a \$2,000,000 line of credit, which is subject to a borrowing base calculation based on the Company’s eligible accounts receivable and eligible inventory each- multiplied by an applicable advance rate, with an overall limitation tied to the Company’s eligible accounts receivable. As of December 31, 2019, we had borrowing capacity of \$1,102,917 and an outstanding balance of \$624,347, resulting in the approximate availability of \$424,000 on the credit facility. During the twelve-month period between January 1, 2019 and December 31, 2019, the Company’s cash balance decreased from \$4,678,891 to \$3,300,600, or approximately \$115,000 per month. In comparison, during the twelve-month period between January 1, 2018 and December 31, 2018, the Company’s cash balance decreased from \$8,385,595 to \$4,678,891, or approximately \$309,000 per month. This improvement is the result of improved revenues and cost management efforts.

Since inception, the Company has incurred operating losses and has reported negative cash flows from operating activities. Since 2012, the Company has made significant investments in the engineering, development and marketing of an intelligent automation platform, including but not limited to, hardware and software enhancements, support services and applications. The funding for these development efforts has contributed to the ongoing operating losses and use of cash. Operating losses have been financed by debt and equity transactions, credit facility capacity, the sale of a wholly-owned subsidiary and management of working capital levels. The report from our independent registered public accounting firm on our consolidated financial statements for the year ended December 31, 2019 stated there is substantial doubt about our ability to continue as a going concern.

The Company's ability to continue as a going concern is dependent upon generating profitable operations in the future and/or securing the necessary financing to meet its obligations and repay its liabilities arising from normal business operations when they come due. There can be no assurance that the Company will be able to secure such financing at commercially reasonable terms, if at all. If cash resources become insufficient to meet the Company's ongoing obligations, the Company will be required to scale back or discontinue portions of its operations or discontinue operations entirely, whereby, the Company's shareholders may lose some or all of their investment.

The Company's Board also continues to consider strategic alternatives to maximize shareholder value, including but not limited to, a sale of the Company, an investment in the Company, a merger or other business combination, a sale of all or substantially all assets or a strategic joint venture. However, these actions are not solely within the control of the Company. At March 30, 2020, no definitive alternatives had been identified.

During the second half of 2019, the Company began initiating a number of cost elimination and liquidity management actions, including, reviewing opportunities to decrease spend with third party consultants and providers, strategically reviewing whether or not to fill employee positions in the event of vacancies, and implementing sales campaigns to sell slow-moving inventory and reducing existing inventory volumes. Management expects these actions will continue to reduce operating losses. The full impact of these actions is not expected to be reflected in the Company's financial statements in the next twelve months. There is no guarantee these actions, nor any other actions identified, will yield profitable operations in the foreseeable future.

On January 30, 2020 the World Health Organization ("WHO") announced a global health emergency because of a new strain of a novel coronavirus in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of operations. In March 2020, the World Health Organization classified the COVID-19 outbreak a pandemic, based on the rapid increase in exposure globally. The spread of the COVID-19 outbreak has caused significant volatility and uncertainty in U.S. and international markets. The COVID-19 outbreak has and could continue to impact demand for our products, customers' ability to meet payment obligations to the Company, our supply chain and production capabilities, and our workforces' ability to deliver our products and services. At this time, the disruption is expected to be temporary; however, the length or severity of this pandemic is unknown. Management is actively monitoring the impact of the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. While we expect this disruption to have a material adverse impact our results of operations, financial condition and cash flows for the year 2020, the Company is unable to reasonably determine the impact at this time.

The Company expects to draw on its' cash reserves and utilize the credit facility to the extent availability exists to finance its near term working capital needs. We expect to continue to incur operating losses and negative operating cash flows for one year beyond the date of these financial statements. Accordingly, and in light of the Company's condition, there is substantial doubt about the Company's ability to continue as a going concern.

Working Capital

Our working capital (current assets in excess of current liabilities) from operations decreased by \$2,018,849 during the year ended December 31, 2019 from a working capital of \$6,206,299 at December 31, 2018, to \$4,187,450 at December 31, 2019. The majority of the decrease was due to the operating losses for 2019.

Revolving Credit Facility

On September 30, 2014, the Company entered into a loan and security agreement (the “Heritage Bank Loan Agreement”), with Heritage Bank of Commerce, a California state chartered bank (“Heritage Bank”), governing a revolving credit facility in a principal amount not to exceed \$2,000,000 (the “Credit Facility”). Availability of borrowings under the Credit Facility is subject to a borrowing base calculation based on the Company’s eligible accounts receivable and eligible inventory each multiplied by an applicable advance rate, with an overall limitation tied to the Company’s eligible accounts receivable. The Heritage Bank Loan Agreement is available for working capital and other general business purposes. The outstanding principal balance of the Credit Facility bears interest at the Prime Rate plus 3.00%, which was 7.75% at December 31, 2019 and 8.50% at December 31, 2018. On October 9, 2014, as part of the Heritage Bank Loan Agreement, Heritage Bank was granted a warrant to purchase 250,000 shares of Telkonet common stock. The warrant has an exercise price of \$0.20 and expires October 9, 2021. On November 6, 2019, the eleventh amendment to the Credit Facility was executed to extend the maturity date to September 30, 2021, unless earlier accelerated under the terms of the Heritage Bank Loan Agreement, and eliminate the maximum EBITDA loss covenant. The eleventh amendment was effective as of September 30, 2019.

The Heritage Bank Loan Agreement contains covenants that place restrictions on, among other things, the incurrence of debt, granting of liens and sale of assets. The Heritage Bank Loan Agreement also contains financial covenants. As discussed above, the EBITDA loss covenant was eliminated in the eleventh amendment to the Credit Facility. The sole financial covenants are a minimum asset coverage ratio and a minimum unrestricted cash balance of \$2,000,000, both of which are measured at the end of each month. A violation of any of these covenants could result in an event of default under the Heritage Bank Loan Agreement. Upon the occurrence of such an event of default or certain other customary events of defaults, payment of any outstanding amounts under the Credit Facility may be accelerated and Heritage Bank’s commitment to extend credit under the Heritage Bank Loan Agreement may be terminated. The Heritage Bank Loan Agreement contains other representations and warranties, covenants, and other provisions customary to transactions of this nature.

The outstanding balance on the Credit Facility was \$624,347 and \$121,474 at December 31, 2019 and 2018 and the remaining available borrowing capacity was approximately \$424,000 and \$499,000, respectively. As of December 31, 2019, the Company was in compliance with all financial covenants.

Cash Flow from Operations Analysis

Cash used in operating activities of operations was \$1,875,846 and \$3,945,742 during the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019, our primary capital needs included costs incurred to increase energy management sales, inventory procurement, and managing current liabilities. The working capital changes during the year ended December 31, 2019 were primarily related to an approximate \$1,232,000 increase in accounts receivable, a \$468,000 decrease in contract liabilities, partially offset by an approximate \$857,000 increase in accounts payable, a \$544,000 decrease in inventory, and a \$326,000 decrease in prepaid expenses and other assets. The primary working capital change during the year ended December 31, 2018 were primarily related to an approximate \$570,000 decrease in accounts payable, a \$512,000 decrease in deferred revenues, a \$434,000 increase in prepaid expenses, a \$401,000 increase in inventories and a \$124,000 decrease in customer deposits. The cash outlays were partially offset by an approximate \$144,000 expense related to stock compensation, a \$454,000 increase in contract liabilities and a \$474,000 decrease in accounts receivable. Accounts receivable fluctuates based on the negotiated billing terms with customers and collections. We purchase inventory based on forecasts and orders, and when those forecasts and orders change, the amount of inventory may also fluctuate. Accounts payable fluctuates with changes in inventory levels, volume of inventory purchases, and negotiated supplier and vendor terms.

Cash used in investing activities was \$5,318 and \$10,225 during the years ended December 31, 2019 and 2018, respectively. During the years ended December 31, 2019 and 2018, the cash used by investing activities reflects the purchases of property and equipment. Cash provided by financing activities was \$502,873 and cash used in financing activities was \$560,737 during the years ended December 31, 2019 and 2018, respectively. During the year ended December 31, 2019, \$11,739,000 in cash proceeds were borrowed on the line of credit and \$11,236,127 cash was used for payments on the line of credit.

We are working to manage our current liabilities while we continue to make changes in operations to improve our cash flow and liquidity position.

Management expects that global economic conditions, in particular the impacts and uncertainties of the COVID-19 outbreak and the decreasing price of energy, along with competition will continue to present a challenging operating environment through 2020; therefore working capital management will continue to be a high priority for 2020. The Company's estimated cash requirements for operations over the next 12 months are anticipated to benefit from the cost elimination and liquidity management actions that the Company has initiated. However, due to the speed with which the COVID-19 pandemic is developing and the uncertainty of its duration and the timing of recovery, we are unable to predict at this time the extent to which the COVID-19 pandemic may impact our financial results, including liquidity.

Inflation

We do not believe that inflation has had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could adversely affect our business, financial condition and results of operations.

Off-Balance Sheet Arrangements

The Company has no material off-balance sheet arrangements.

New Accounting Pronouncements

See Note B of the Consolidated Financial Statements for a description of new accounting pronouncements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

This item is not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

See the Consolidated Financial Statements and Notes thereto commencing on Page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

This item is not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that material information required to be disclosed in our periodic reports filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and to ensure that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer as appropriate, to allow timely decisions regarding required disclosure. The Company's Chief Executive Officer and Chief Financial Officer each evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2019. Based on these evaluations, the Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures required by paragraph (b) of Rule 13a-15 and 15d-15 were not effective as of December 31, 2019 as a result of the material weaknesses discussed below.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. The Company's internal control over financial reporting is designed to provide reasonable assurances regarding the reliability of financial reporting and the preparation of the financial statements of the Company in accordance with U.S. generally accepted accounting principles, or GAAP. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

With the participation of our Chief Executive Officer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019 based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on our evaluation and the material weaknesses described below, management concluded that the Company did not maintain effective internal control over financial reporting as of December 31, 2019 based on the COSO framework criteria.

Management did not properly design or maintain effective controls over the control environment and monitoring components of COSO. We did not have a sufficient complement of accounting and financial personnel with an appropriate level of knowledge to address technical accounting and financial reporting matters in accordance with generally accepted accounting principles and the Company's overall financial reporting requirements. We also lack sufficient information technology resources to address our IT general control environment requirements. The failures within the control environment and monitoring components contributed to the following control activity level material weaknesses:

- Revenues – We did not properly design or maintain effective controls over the recording of revenue recognition for contracts whose performance obligations are fulfilled over time.
- Financial Statement Close and Reporting – We did not properly design or maintain effective controls over the period end financial close and reporting process. Specifically, we lacked control over the review of account reconciliations, journal entries, identification of related party transactions, and reporting of our financial results and disclosures.
- Information Technology – We did not properly design or maintain effective controls to prevent unauthorized access to certain systems, programs and data, and provide for periodic review and monitoring of access and changes in programs, including review of security logs and analysis of segregation of duties conflicts.
- Segregation of Duties – We did not maintain adequate segregation of duties within the Company's business processes, financial applications, and IT systems. Specifically, we did not have appropriate controls in place to adequately assess the segregation of job responsibilities and system user access for initiating, authorizing, and recording transactions.

These control deficiencies could result in a misstatement of account balances resulting in a more than remote likelihood that a material misstatement to our financial statements may not be prevented or detected on a timely basis. Accordingly, we have determined that these control deficiencies as described above constitute material weaknesses.

We are reviewing actions to remediate the identified material weaknesses. As we continue to evaluate and work to improve our internal controls over financial reporting, our senior management may determine to take additional measures to address deficiencies or modify the remediation efforts. Until the remediation efforts that our senior management identifies as necessary, are completed, tested and determined effective, the material weaknesses described above will continue to exist. At present, the Company does not expect to hire additional personnel to remediate these control deficiencies in the near future.

In light of these material weaknesses, we performed additional analyses and procedures in order to conclude that our consolidated financial statements as of and for the years ended December 31, 2019 and 2018 included in this Annual Report on Form 10-K were fairly stated in accordance with U.S. GAAP. Notwithstanding the identified material weaknesses, our management has concluded that the audited financial statements included in this Annual Report on Form 10K for the years ended December 31, 2019 and 2018 fairly state, in all material respects, our financial position, results of operations, cash flows, and changes in stockholders' equity as of and for the periods presented in accordance with U.S. GAAP.

Under applicable Securities Law, the Company is not required to obtain an attestation report from the Company's independent registered public accounting firm regarding internal control over financial reporting, and accordingly, such an attestation has not been obtained or included in this Annual Report.

Attestation Report of the Registered Public Accounting Firm

Not applicable.

Changes in Internal Controls

Other than the material weaknesses discussed above, during the year ended December 31, 2019, there have been no changes in our internal control over financial reporting that have materially affected or are reasonably likely to materially affect our internal controls over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Pursuant to General Instruction G(3), information on directors and executive officers of the Registrant and corporate governance matters is incorporated by reference from our definitive proxy statement for the annual shareholder meeting to be held on May 28, 2020.

Code of Ethics

The Board has approved, and Telkonet has adopted, a Code of Ethics that applies to all directors, officers and employees of the Company. A copy of the Company's Code of Ethics was filed as Exhibit 14 to the Company's Annual Report on Form 10-KSB for the year ended December 31, 2003 (filed with the Securities and Exchange Commission on March 30, 2004). In addition, the Company will provide a copy of its Code of Ethics free of charge upon request to any person submitting a written request to the Company's Chief Executive Officer.

ITEM 11. EXECUTIVE COMPENSATION.

Pursuant to General Instruction G(3), information on executive compensation is incorporated by reference from our definitive proxy statement for the annual shareholder meeting to be held on May 28, 2020.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

Pursuant to General Instructions G(3), information on security ownership of certain beneficial owners and management and related stockholder matters are incorporated by reference from our definitive proxy statement for the annual shareholder meeting to be held on May 28, 2020.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information concerning securities authorized for issuance pursuant to equity compensation plans approved by the Company's stockholders and equity compensation plans not approved by the Company's stockholders as of December 31, 2019.

	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	3,599,793	\$ 0.16	409,269
Equity compensation plans not approved by security holders	—	—	—
Total	<u>3,599,793</u>	<u>\$ 0.16</u>	<u>409,269</u>

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE.

Pursuant to General Instruction G(3), information on certain relationships and related transactions and director independence is incorporated by reference from our definitive proxy statement for the annual shareholder meeting to be held on May 28, 2020.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

Pursuant to General Instruction G(3), information on principal accounting fees and services is incorporated by reference from our definitive proxy statement for the annual shareholder meeting to be held on May 28, 2020.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) Documents filed as part of this report.

(1) Financial Statements. The following financial statements are included in Part II, Item 8 of this Annual Report on Form 10-K:

[Report of BDO USA, LLP on Consolidated Financial Statements as of and for the years ended December 31, 2019 and 2018](#)

[Consolidated Balance Sheets as of December 31, 2019 and 2018](#)

[Consolidated Statements of Operations for the Years ended December 31, 2019 and 2018](#)

[Consolidated Statements of Stockholders' Equity for the Years ended December 31, 2019 and 2018](#)

[Consolidated Statements of Cash Flows for Years ended December 31, 2019 and 2018](#)

[Notes to Consolidated Financial Statements](#)

(2) Financial Statement Schedules

Additional Schedules are omitted as the required information is inapplicable or the information is presented in the financial statements or related notes.

(3) Exhibits required to be filed by Item 601 of Regulation S-K

EXHIBIT INDEX

The following exhibits are included herein or incorporated by reference:

Exhibit Number	Description Of Document
2.1	Asset Purchase Agreement by and between Telkonet, Inc. and Smart Systems International, dated as of February 23, 2007 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on March 2, 2007)
2.2	Unit Purchase Agreement by and among Telkonet, Inc., EthoStream, LLC and the members of EthoStream, LLC dated as of March 15, 2007 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on March 19, 2007)
2.3	Asset Purchase Agreement by and among EthoStream, LLC, Telkonet, Inc., and DCI-Design Communications, dated as of March 28, 2017 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on March 31, 2017)
3.1	Amended and Restated Articles of Incorporation of the Company (incorporated by reference to our Form S-8 (File No. 333-47986), filed on October 16, 2000)
3.2	Bylaws of the Company (incorporated by reference to our Registration Statement on Form S-1 (File No. 333-108307), filed on August 28, 2003)
3.3	Amendment to Amended and Restated Articles of Incorporation of the Company (incorporated by reference to our Form 8-K (File No. 001-31972), filed November 18, 2009)
3.4	Amendment to Amended and Restated Articles of Incorporation (incorporated by reference to our Form 8-K (File No. 001-31972) filed on August 9, 2010)
3.5	Amendment to Amended and Restated Articles of Incorporation of the Company (incorporated by reference to our Form 8-K (File No. 001-31972) filed on April 13, 2011)
4.1	Form of Warrant to Purchase Common Stock (incorporated by reference to our Form 8-K (File No. 001-31972) filed on November 18, 2009)
4.2	Form of Warrant to Purchase Common Stock (incorporated by reference to our Form 8-K (File No. 001-31972) filed on August 9, 2010)
4.3	Form of Warrant to Purchase Common Stock (incorporated by reference to our Form 8-K (File No. 001-31972) filed on April 13, 2011)
4.4	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities and Exchange Act of 1934
10.1	Series A Convertible Redeemable Preferred Stock Securities Purchase Agreement, dated November 16, 2009 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on November 18, 2009)
10.2	Series A Convertible Redeemable Preferred Stock Registration Rights Agreement, dated November 16, 2009 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on November 18, 2009)
10.3	Form of Director and Officer Indemnification Agreement (incorporated by reference to our Form 10-K (File No. 001-31972) filed on March 31, 2010)
10.4	Series B Convertible Redeemable Preferred Stock Securities Purchase Agreement, dated August 4, 2010 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on August 9, 2010)
10.5	Series B Convertible Redeemable Preferred Stock Registration Rights Agreement, dated August 4, 2010 (incorporated by reference to our Form 8-K (File No. 001-31972) filed on August 9, 2010)
10.6	2010 Stock Option and Incentive Plan (incorporated by reference to our Registration Statement filed on Form S-8 (File No. 333-175737) filed July 22, 2011)
10.7	Securities Purchase Agreement, dated April 8, 2011, by and among Telkonet, Inc. and the parties listed therein (incorporated by reference to our Form 8-K (File No. 001-31972) filed on April 13, 2011)
10.8	Registration Rights Agreement, dated April 8, 2011, by and among Telkonet, Inc. and the parties listed therein (incorporated by reference to our Form 8-K (File No. 001-31972) filed on April 13, 2011)
*10.9	Employment Agreement by and between Telkonet, Inc. and Jason L. Tienor, dated as October 1, 2018 (incorporated by reference to our Form 10-K (File No. 001-31972) filed on April 1, 2019)
*10.10	Employment Agreement by and between Telkonet, Inc. and Jeffrey J. Sobieski, dated as of October 1, 2018 (incorporated by reference to our Form 10-K (File No. 001-31972) filed on April 1, 2019)

- *10.11 [Employment Agreement by and between Telkonet, Inc. and Richard E. Mushrush, dated as of October 1, 2018](#)(incorporated by reference to our Form 10-K (File No. 001-31972) filed on April 1, 2019)
- 10.12 [2010 Amended and Restated Stock Option and Incentive Plan](#) (amended and restated effective as of November 17, 2016, incorporated by reference as an exhibit to Form 10-K (File No. 001-31972) filed April 3, 2017)
- 10.13 [Loan and Security Agreement, dated September 30, 2014, by and between Telkonet, Inc. and Heritage Bank of Commerce](#).(incorporated by reference to our Form 8-K (File No. 001-31972) filed October 2, 2014)
- 10.14 [First Amendment to Loan and Security Agreement, dated February 17, 2016, by and between Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 8-K (File No. 001-31972) filed February 23, 2016)
- 10.15 [Second Amendment to Loan and Security Agreement, dated October 27, 2016, by and between Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 8-K (File No. 001-31972) filed October 28, 2016)
- 10.16 [Third Amended to Loan and Security Agreement, dated January 25, 2017, by and among Telkonet, Inc. and Heritage Bank of Commerce](#)
- 10.17 [Fourth Amended to Loan and Security Agreement, dated March 29, 2017, by and among Telkonet, Inc. and Heritage Bank of Commerce](#)
- 10.18 [Fifth Amended to Loan and Security Agreement, dated August 29, 2017, by and among Telkonet, Inc. and Heritage Bank of Commerce](#)
- 10.19 [Sixth Amendment to Loan and Security Agreement, dated October 23, 2017, by and between Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 8-K (File No. 001-31972) filed October 26, 2017)
- 10.20 [Seventh Amendment to Loan and Security Agreement entered into as of February 2, 2018, by and among Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 10-Q (File No. 001-31972) filed November 14, 2018)
- 10.21 [Eighth Amendment to Loan and Security Agreement entered into as of April 5, 2018, by and among Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 10-Q (File No. 001-31972) filed November 14, 2018)
- 10.22 [Ninth Amendment to Loan and Security Agreement entered into as of November 7, 2018, by and among Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 10-Q (File No. 001-31972) filed November 14, 2018)
- 10.23 [Tenth Amendment to Loan and Security Agreement entered into as of February 12, 2019, by and among Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 8-K (File No. 001-31972) filed February 14, 2019)
- 10.24 [Eleventh Amendment to Loan and Security Agreement entered into as of November 6, 2019, by and among Telkonet, Inc. and Heritage Bank of Commerce](#) (incorporated by reference to our Form 8-K (File No. 001-31973) filed November 7, 2019)
- 14 [Code of Ethics](#) (incorporated by reference to our Form 10-KSB (File No. 001-31972), filed on March 30, 2004)
- 21 [Telkonet, Inc. Subsidiaries](#) (incorporated by reference to our Form 10-K (File No. 001-31972) filed March 16, 2007)
- 23 [Consent of BDO USA, LLP, Independent Registered Public Accounting Firm](#)
- 31.1 [Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 of Jason L. Tienor](#)
- 31.2 [Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 of Richard E. Mushrush](#)
- 32.1 [Certification of Jason L. Tienor pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- 32.2 [Certification of Richard E. Mushrush pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- 101.INS XBRL Instance Document
- 101.SCH XBRL Schema Document

* Indicates management contract or compensatory plan or arrangement.

ITEM 16. FORM 10-K SUMMARY.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Exchange Act, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TELKONET, INC.

Dated: March 30, 2020

/s/ Jason L. Tienor
Jason L. Tienor
Chief Executive Officer

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

<u>Name</u>	<u>Position</u>	<u>Date</u>
<u>/s/ Jason L. Tienor</u> Jason L. Tienor	Chief Executive Officer and Director (principal executive officer)	March 30, 2020
<u>/s/ Richard E. Mushrush</u> Richard E. Mushrush	Chief Financial Officer (principal financial officer and principal accounting officer)	March 30, 2020
<u>/s/ Arthur E. Byrnes</u> Arthur E. Byrnes	Chairman of the Board	March 30, 2020
<u>/s/ Tim S. Ledwick</u> Tim S. Ledwick	Director	March 30, 2020
<u>/s/ Peter T. Kross</u> Peter T. Kross	Director	March 30, 2020
<u>/s/ Leland D. Blatt</u> Leland D. Blatt	Director	March 30, 2020

TELKONET, INC.

Index to Financial Statements

<u>Report of Independent Registered Public Accounting Firm</u>	F-2
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
Telkonet, Inc.
Waukesha, Wisconsin

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Telkonet, Inc. (the “Company”) as of December 31, 2019 and 2018, the related consolidated statements of operations, stockholders’ equity, and cash flows for the years then ended, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the period ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note A to the consolidated financial statements, the Company has suffered operating losses, has negative operating cash flows and is dependent upon its ability to generate profitable operations in the future and/or obtain additional financing to meet its obligations and repay its liabilities arising from normal business operations when they come due. In addition, as more fully described in Note A, the Company has been materially impacted by the outbreak of a novel coronavirus (COVID-19), which was declared a global pandemic by the World Health Organization in March 2020. These conditions raise substantial doubt about its ability to continue as a going concern. Management’s plans in regard to these matters are also described in Note A. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Change in Accounting Method Related to Leases

As discussed in Notes B and M to the consolidated financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of Accounting Standards Codification Topic 842 – Leases.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 2013.

/s/ BDO USA, LLP

Milwaukee, Wisconsin
March 30, 2020

TELKONET, INC.
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 AND 2018

	December 31, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 3,300,600	\$ 4,678,891
Accounts receivable, net	2,283,587	1,081,291
Inventories	1,373,074	1,790,919
Contract assets	188,120	314,749
Prepaid expenses	251,619	577,386
Income taxes receivable	85,070	19,695
Total current assets	7,482,070	8,462,931
Property and equipment, net	186,525	247,289
Other assets:		
Deposits	17,130	17,130
Operating lease right of use assets	892,170	–
Deferred tax asset	28,021	–
Total other assets	937,321	17,130
Total Assets	\$ 8,605,916	\$ 8,727,350
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,265,560	\$ 408,045
Accrued liabilities	527,826	656,611
Line of credit	624,347	121,474
Contract liabilities – current	653,053	1,070,502
Operating lease liabilities – current	223,835	–
Total current liabilities	3,294,621	2,256,632
Long-term liabilities:		
Contract liabilities – long – term	111,131	162,121
Operating lease liabilities – long-term	758,315	–
Deferred lease liability – long-term	–	71,877
Total long-term liabilities	869,446	233,998
Total Liabilities	\$ 4,164,067	\$ 2,490,630
Commitments and contingencies		
Stockholders' Equity		
Series A, par value \$.001 per share; 215 shares authorized, 185 shares outstanding at December 31, 2019 and 2018, preference in liquidation of \$1,674,195 and \$1,600,168 as of December 31, 2019 and 2018, respectively	1,340,566	1,340,566
Series B, par value \$.001 per share; 567 shares authorized, 52 shares outstanding at December 31, 2019 and 2018, preference in liquidation of \$455,904 and \$435,081 as of December 31, 2019 and 2018, respectively	362,059	362,059
Common stock, par value \$.001 per share; 190,000,000 shares authorized; 135,990,491 and 134,793,211 shares issued and outstanding at December 31, 2019 and 2018, respectively	135,990	134,792
Additional paid-in-capital	127,708,773	127,570,709
Accumulated deficit	(125,105,539)	(123,171,406)
Total stockholders' equity	4,441,849	6,236,720
Total Liabilities and Stockholders' Equity	\$ 8,605,916	\$ 8,727,350

See accompanying notes to consolidated financial statements

TELKONET, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

	2019	2018
Revenues, net:		
Product	\$ 11,212,854	\$ 7,616,415
Recurring	769,342	815,564
Total Net Revenues	<u>11,982,196</u>	<u>8,431,979</u>
Cost of Sales:		
Product	6,703,494	4,392,643
Recurring	301,500	269,443
Total Cost of Sales	<u>7,004,994</u>	<u>4,662,086</u>
Gross Profit	<u>4,977,202</u>	<u>3,769,893</u>
Operating Expenses:		
Research and development	1,737,385	1,879,676
Selling, general and administrative	5,155,092	4,843,859
Depreciation and amortization	66,082	67,107
Total Operating Expenses	<u>6,958,559</u>	<u>6,790,642</u>
Operating Loss	<u>(1,981,357)</u>	<u>(3,020,749)</u>
Other Income (Expenses):		
Gain on sale of fixed assets	150	-
Interest income (expense), net	(53,289)	13,622
Total Other Income (Expense)	<u>(53,139)</u>	<u>13,622</u>
Loss before Provision for Income Taxes	(2,034,496)	(3,007,127)
Income Tax Provision (Benefit)	(100,363)	9,623
Net Loss Attributable to Common Stockholders	<u>\$ (1,934,133)</u>	<u>\$ (3,016,750)</u>
Net Loss per Common Share:		
Basic - net loss attributable to common stockholders	<u>\$ (0.01)</u>	<u>\$ (0.02)</u>
Diluted - net loss attributable to common stockholders	<u>\$ (0.01)</u>	<u>\$ (0.02)</u>
Weighted Average Common Shares Outstanding used in computing basic net loss per share	135,213,641	134,055,098
Weighted Average Common Shares Outstanding used in computing diluted net loss per share	135,213,641	134,055,098

See accompanying notes to consolidated financial statements

TELKONET, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

	Series A Preferred Stock Shares	Series A Preferred Stock Amount	Series B Preferred Stock Shares	Series B Preferred Stock Amount	Common Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
Balance at January 1, 2018	185	\$ 1,340,566	52	\$ 362,059	133,695,111	\$ 133,695	\$ 127,421,402	\$ (119,724,656)	\$ 9,533,066
January 1, 2018, Cumulative effect of a change in accounting principle related to ASC 606, net of tax	-	-	-	-	-	-	-	(430,000)	(430,000)
Shares issued to directors	-	-	-	-	1,098,100	1,097	142,903	-	144,000
Stock-based compensation expense related to employee stock options	-	-	-	-	-	-	6,404	-	6,404
Net income attributable to common stockholders	-	-	-	-	-	-	-	(3,016,750)	(3,016,750)
Balance at December 31, 2018	<u>185</u>	<u>\$ 1,340,566</u>	<u>52</u>	<u>\$ 362,059</u>	<u>134,793,211</u>	<u>\$ 134,792</u>	<u>\$ 127,570,709</u>	<u>\$ (123,171,406)</u>	<u>\$ 6,236,720</u>

See accompanying notes to the consolidated financial statements

TELKONET, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (continued)
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

	Series A Preferred Stock Shares	Series A Preferred Stock Amount	Series B Preferred Stock Shares	Series B Preferred Stock Amount	Common Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
Balance at January 1, 2019	185	\$ 1,340,566	52	\$ 362,059	134,793,211	\$ 134,792	\$ 127,570,709	\$ (123,171,406)	\$ 6,236,720
Shares issued to directors	-	-	-	-	1,197,280	1,198	130,802	-	132,000
Stock-based compensation expense related to employee stock options	-	-	-	-	-	-	7,262	-	7,262
Net loss attributable to common stockholders	-	-	-	-	-	-	-	(1,934,133)	(1,934,133)
Balance at December 31, 2019	<u>185</u>	<u>\$ 1,340,566</u>	<u>52</u>	<u>\$ 362,059</u>	<u>135,990,491</u>	<u>\$ 135,990</u>	<u>127,708,773</u>	<u>\$ (125,105,539)</u>	<u>\$ 4,441,849</u>

See accompanying notes to the consolidated financial statements

TELKONET, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

	<u>2019</u>	<u>2018</u>
Cash Flows from Operating Activities:		
Net loss	\$ (1,934,133)	\$ (3,016,750)
Adjustments to reconcile net loss to cash used in operating activities:		
Stock-based compensation expense related to employee stock options	7,262	6,404
Stock issued to directors as compensation	132,000	144,000
Depreciation and amortization	66,082	67,107
Provision for doubtful accounts, net of recoveries	-	55,152
Reserve for inventory obsolescence	(126,509)	(130,749)
Noncash operating lease expense	237,901	-
Changes in operating assets and liabilities:		
Accounts receivable	(1,202,296)	473,845
Inventories	544,354	(400,637)
Prepaid expenses and other current assets	325,767	(433,820)
Accounts payable	857,515	(570,162)
Accrued liabilities and expenses	(128,785)	(12,203)
Contract liability	(468,439)	329,243
Contact assets	126,629	34,251
Operating lease liability	(219,798)	-
Deferred revenue	-	(512,066)
Income taxes receivable	(93,396)	(2,395)
Deferred lease liability	-	23,038
Net Cash Used In Operating Activities	<u>(1,875,846)</u>	<u>(3,945,742)</u>
Cash Flows From Investing Activities:		
Purchase of property and equipment	(5,318)	(10,225)
Net Cash Used In Investing Activities	<u>(5,318)</u>	<u>(10,225)</u>
Cash Flows From Financing Activities:		
Proceeds from line of credit	11,739,000	3,720,000
Payments on line of credit	(11,236,127)	(4,280,737)
Net Cash Provided By (Used) In Financing Activities	<u>502,873</u>	<u>(560,737)</u>
Net decrease in cash and cash equivalents	(1,378,291)	(4,516,704)
Cash and cash equivalents at the beginning of the period	4,678,891	9,195,595
Cash and cash equivalents at the end of the period	<u>\$ 3,300,600</u>	<u>\$ 4,678,891</u>
Reconciliation of cash and cash equivalents to the consolidated balance sheets:		
Cash and cash equivalents	\$ 3,300,600	\$ 4,678,891
Total cash and cash equivalents	<u>\$ 3,300,600</u>	<u>\$ 4,678,891</u>

See accompanying notes to consolidated financial statements

TELKONET, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

Supplemental Disclosures of Cash Flow Information:	2019	2018
Cash transactions:		
Cash paid during the year for interest	\$ 83,109	\$ 32,662
Cash paid (received) during the year for income taxes, net of refunds	(6,967)	12,410
Non-cash transactions:		
Issuance of stock to directors	\$ 132,000	\$ 144,000

See accompanying notes to consolidated financial statements

TELKONET, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018

NOTE A – BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

A summary of the significant accounting policies applied in the preparation of the accompanying consolidated financial statements follows.

Business and Basis of Presentation

Telkonet, Inc. (the “Company”, “Telkonet”), formed in 1999 and incorporated under the laws of the state of Utah, is the creator of the EcoSmart Platform of intelligent automation solutions designed to optimize energy efficiency, comfort and analytics in support of the emerging Internet of Things (“IoT”).

In 2007, the Company acquired substantially all of the assets of Smart Systems International (“SSI”), which was a provider of energy management products and solutions to customers in the United States and Canada and the precursor to the Company’s EcoSmart platform. The EcoSmart platform provides comprehensive savings, management reporting, analytics and virtual engineering of a customer’s portfolio and/or property’s room-by-room energy consumption. Telkonet has deployed more than a half million intelligent devices worldwide in properties within the hospitality, educational, governmental and other commercial markets. The EcoSmart platform is recognized as a solution for reducing energy consumption, operational costs and carbon footprints, and eliminating the need for new energy generation in these marketplaces – all whilst improving occupant comfort and convenience.

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, Telkonet Communications, Inc., operating as a single reportable business segment.

Going Concern and Management’s Plan

The accompanying financial statements have been prepared on a going concern basis which assumes the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future and, thus, do not include any adjustments relating to the recoverability and classification of assets and liabilities that may be necessary if the Company is unable to continue as a going concern.

Since inception through December 31, 2019, we have incurred cumulative losses of \$125,105,539 and have never generated enough funds through operations to support our business. For the year ended December 31, 2019, the Company had negative operating cash flow of \$1,875,846 from operations. The Company’s ability to continue as a going concern is dependent upon generating profitable operations in the future and obtaining the necessary financing to meet its obligations and repay its liabilities arising from normal business operations when they come due. There can be no assurance that the Company will be able to secure such financing at commercially reasonable terms, if at all. If cash resources become insufficient to meet the Company’s ongoing obligations, the Company will be required to scale back or discontinue portions of its operations or discontinue operations entirely, whereby, the Company’s shareholders may lose some or all of their investment.

The Company’s Board also continues to consider strategic alternatives to maximize shareholder value, including but not limited to, a sale of the Company, an investment in the Company, a merger or other business combination, a sale of all or substantially all assets or a strategic joint venture. However, these actions are not solely within the control of the Company. At March 30, 2020, no definitive alternatives had been identified.

During the second half of 2019, the Company began initiating a number of cost elimination and liquidity management actions, including, reviewing opportunities to decrease spend with third party consultants and providers, strategically reviewing whether or not to fill employee positions in the event of vacancies, and implementing sales campaigns to sell slow-moving inventory and reducing existing inventory volumes. Management expects these actions will continue to reduce operating losses. The full impact of these actions is not expected to be reflected in the Company's financial statements in the next twelve months. There is no guarantee these actions, nor any other actions identified, will yield profitable operations in the foreseeable future.

On January 30, 2020 the World Health Organization ("WHO") announced a global health emergency because of a new strain of a novel coronavirus in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of operations. In March 2020, the World Health Organization classified the COVID-19 outbreak a pandemic, based on the rapid increase in exposure globally. The spread of the COVID-19 outbreak has caused significant volatility and uncertainty in U.S. and international markets. The COVID-19 outbreak has and could continue to impact demand for our products, customers' ability to meet payment obligations to the Company, our supply chain and production capabilities, and our workforces' ability to deliver our products and services. At this time, the disruption is expected to be temporary; however, the length or severity of this pandemic is unknown. Management is actively monitoring the impact of the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. While we expect this disruption to have a material adverse impact our results of operations, financial condition and cash flows for the year 2020, the Company is unable to reasonably determine the impact at this time. Refer to Note P for further detail on this matter.

At December 31, 2019, the Company had approximately \$3,300,600 of cash and approximately \$424,000 of availability on its credit facility. The Company currently expects to draw on these cash reserves and utilize the credit facility to finance its near term working capital needs. It expects to continue to incur operating losses and negative operating cash flows for one year beyond the date of these financial statements. The Credit Facility provides us with needed liquidity to assist in meeting our obligations or pursuing strategic objectives. Continued operating losses will deplete these cash reserves and could result in a violation of the financial covenants. Consequently, repayment of amounts borrowed under the Credit Facility may be accelerated and Heritage Bank's commitment to extend credit under the Heritage Bank Loan Agreement may be terminated. The occurrence of any of these events could have a material adverse effect on our business and results of operations.

Accordingly, and in light of the Company's historic losses, there is substantial doubt about the Company's ability to continue as a going concern.

Concentrations of Credit Risk

Financial instruments and related items, which potentially subject the Company to concentrations of credit risk, consist primarily of cash, cash equivalents and trade receivables. The Company places its cash and temporary cash investments with credit quality institutions. At times, such investments may be in excess of the FDIC insurance limit. The Company has never experienced any losses related to these balances. With respect to trade receivables, the Company performs ongoing credit evaluations of its customers' financial conditions and limits the amount of credit extended when deemed necessary. The Company provides credit to its customers primarily in the United States in the normal course of business. The Company routinely assesses the financial strength of its customers and, as a consequence, believes its trade receivables credit risk exposure is limited.

Cash and Cash Equivalents

The Company considers all highly liquid debt instruments purchased with an original maturity date of three months or less to be cash equivalents.

Accounts Receivable

Accounts receivable are uncollateralized customer obligations due under normal trade terms. The Company records allowances for doubtful accounts based on customer-specific analysis and general matters such as current assessment of past due balances and economic conditions. The Company writes off accounts receivable when they become uncollectible. The allowance for doubtful accounts was \$55,039 and \$65,542 at December 31, 2019 and 2018, respectively. Management identifies a delinquent customer based upon the delinquent payment status of an outstanding invoice, generally greater than 30 days past due date. The delinquent account designation does not trigger an accounting transaction until such time the account is deemed uncollectible. The allowance for doubtful accounts is determined by examining the reserve history and any outstanding invoices that are over 30 days past due as of the end of the reporting period. Accounts are deemed uncollectible on a case-by-case basis, at management's discretion based upon an examination of the communication with the delinquent customer and payment history. Typically, accounts are only escalated to "uncollectible" status after multiple attempts at collection have proven unsuccessful.

The allowance for doubtful accounts for the years ended December 31 are as follows:

	2019	2018
Beginning balance	\$ 65,542	\$ 22,173
Provision charged to expense	29,849	55,152
Deductions	(40,352)	(11,783)
Ending balance	<u>\$ 55,039</u>	<u>\$ 65,542</u>

Inventories

Inventories consist of thermostats, sensors and controllers for Telkonet's EcoSmart product platform. These inventories are purchased for resale and do not include manufacturing labor and overhead. Inventories are stated at the lower of cost or net realizable value determined by the first in, first out (FIFO) method. The Company's inventories are subject to technological obsolescence. Management evaluates the net realizable value of its inventories on a quarterly basis and when it is determined that the Company's carrying cost of such excess and obsolete inventories cannot be recovered in full, a charge is taken against income for the difference between the carrying cost and the estimated realizable amount. The reserve for inventory obsolescence balance was approximately \$241,000 and \$114,000 for the years ended December 31, 2019, and 2018, respectively.

Property and Equipment

In accordance with Accounting Standards Codification ASC 360 "Property Plant and Equipment", property and equipment is stated at cost and is depreciated using the straight-line method over the estimated useful lives of the assets. The estimated useful lives range from 2 to 10 years.

Fair Value of Financial Instruments

The Company accounts for the fair value of financial instruments in accordance with ASC 820, which defines fair value for accounting purposes, established a framework for measuring fair value and expanded disclosure requirements regarding fair value measurements. Fair value is defined as an exit price, which is the price that would be received upon sale of an asset or paid upon transfer of a liability in an orderly transaction between market participants at the measurement date. The degree of judgment utilized in measuring the fair value of assets and liabilities generally correlates to the level of pricing observability. Financial assets and liabilities with readily available, actively quoted prices or for which fair value can be measured from actively quoted prices in active markets generally have more pricing observability and require less judgment in measuring fair value. Conversely, financial assets and liabilities that are rarely traded or not quoted have less price observability and are generally measured at fair value using valuation models that require more judgment. These valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency of the asset, liability or market and the nature of the asset or liability. The Company categorizes financial assets and liabilities that are recurring, at fair value into a three-level hierarchy in accordance with these provisions.

- Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level 2: Quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability; or
- Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and are unobservable.

The Company's financial instruments include cash and cash equivalents, accounts receivable, accounts payable, and certain accrued liabilities. The carrying amounts of these assets and liabilities approximate fair value due to the short maturity of these instruments (Level 1 instruments), except for the line of credit. The carrying amount of the line of credit approximates fair value due to the interest rate and terms approximating those available to the Company for similar obligations (Level 2 instruments).

Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable in accordance with ASC 360-10. Recoverability is measured by comparison of the carrying amount to the future net cash flows which the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds their fair value. Based on the assessment for impairment performed during 2019 and 2018, no impairment was recorded.

Income (Loss) per Common Share

The Company computes earnings per share under ASC 260-10, "Earnings Per Share". Basic net income (loss) per common share is computed using the weighted average shares outstanding. Diluted net income (loss) per common share is computed using the treasury stock method, which assumes that the proceeds to be received on exercise of outstanding stock options and warrants are used to repurchase shares of the Company at the average market price of the common shares for the year. Dilutive common stock equivalents consist of shares issuable upon the exercise of the Company's outstanding stock options and warrants. For both years ended December 31, 2019 and 2018, there were 3,599,793 shares of common stock underlying options and warrants excluded due to these instruments being anti-dilutive, respectively.

Use of Estimates

The preparation of financial statements in conformity with United States of America (U.S.) generally accepted accounting principles (“GAAP”) requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Estimates are used when accounting for items and matters such as revenue recognition and allowances for uncollectible accounts receivable, inventory obsolescence, depreciation and amortization, long-lived assets, taxes and related valuation allowance, income tax provisions, stock-based compensation, and contingencies. The Company believes that the estimates, judgments and assumptions are reasonable, based on information available at the time they are made. Actual results may differ from those estimates.

Income Taxes

The Company accounts for income taxes in accordance with ASC 740-10 “Income Taxes.” Under this method, deferred income taxes (when required) are provided based on the difference between the financial reporting and income tax bases of assets and liabilities and net operating losses at the statutory rates enacted for future periods. The Company has a policy of establishing a valuation allowance when it is more likely than not that the Company will not realize the benefits of its deferred income tax assets in the future.

The Company follows ASC 740-10-25, which prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740-10-25 also provides guidance on de-recognition, classification, treatment of interest and penalties, and disclosure of such positions.

Revenue from Contracts with Customers

Accounting Standards Codification Topic 606, Revenue from Contracts with Customers (“ASC 606, the Standard”) supersedes nearly all legacy revenue recognition guidance. ASC 606, the Standard outlines a comprehensive five-step revenue recognition model based on the principle that an entity should recognize revenue based on when it satisfies its performance obligations by transferring control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for said goods or services.

Identify the customer contracts

The Company accounts for a customer contract under ASC 606 when the contract is legally enforceable. A contract is legally enforceable when all of the following criteria are met: (1) the contract has been approved by the Company and the customer and both parties are committed to perform their respective obligations, (2) the Company can identify each party’s rights regarding goods or services transferred, (3) the Company can identify payment terms for goods or services transferred, (4) the contract has commercial substance, and (5) collectability of all the consideration to which the Company is entitled in exchange for the goods or services transferred is probable.

A contract does not exist if each party to the contract has the unilateral right to terminate a wholly unperformed contract without compensating the other party (or parties). Nearly all of the Company's contracts do not contain such mutual termination rights for convenience. All contracts are in written form.

Identify the performance obligations

The Company will enter into product only contracts that contain a single performance obligation related to the transfer of EcoSmart products to a customer.

The Company will also enter into certain customer contracts that encompass product and installation services, referred to as "turnkey" solutions. These contracts ultimately provide the customer with a solution that enhances the functionality of the customer's existing equipment. For this reason, the Company has determined that the product and installation services are not separately identifiable performance obligations, but in essence represent one, combined performance obligation ("turnkey").

The Company also offers technical phone support services to customers. This service is considered a separate performance obligation.

Determine the transaction price

The Company generally enters into contracts containing fixed prices. It is not customary for the Company to include contract terms that would result in variable consideration. In the rare situation that a contract does include this type of provision, it is not expected to result in a material adjustment to the transaction price. The Company regularly extends pricing discounts; however, they are negotiated up front and adjust the fixed transaction price set out in the contract.

Customer contracts will typically contain upfront deposits that will be applied against future invoices, as well as customer retainage. The intent of any required deposit or retainage is to ensure that the obligations of either party are honored and follow customary industry practices. In addition, the Company will typically be paid in advance at the beginning of any support contracts, consistent with industry practices. None of these payment provisions are intended to represent significant implicit financing. The Company's standard payment terms are thirty days from invoice date. Products are fully refundable when returned in their original packaging without damage or defacing less a restocking fee. Historical returns have shown to be immaterial. The Company offers a standard one-year assurance warranty. However customers can purchase an extended warranty. Under the new standard, extended warranties are accounted for as a service warranty, requiring the revenue to be recognized over the extended service periods. Contracts involving an extended warranty are immaterial and will continue to be combined with technical phone support services revenue and recognized on a straight-line basis over the term of the contract.

Allocate the transaction price to the performance obligations

Revenues from customer contracts are allocated to the separate performance obligations based on their relative stand-alone selling price ("SSP") at contract inception. The SSP is the price at which the Company would sell a promised good or service separately. The best evidence of an SSP is the observable price of a good or service when the entity sells that good or service separately in similar circumstances and to similar customers. However, turnkey solutions are sold for a broad range of amounts resulting from, but not limited to, tiered discounting for value added resellers ("VAR") based upon committed volumes and other economic factors. Due to the high variability of our pricing, the Company cannot establish a reliable SSP using observable data. Accordingly, the Company uses the residual approach to allocate the transaction price to performance obligations related to its turnkey solutions. When support services are not included within the turnkey solution, the residual method is not utilized and no allocation of the transaction price to the performance obligation is necessary.

All support service agreements, whether single or multi-year terms, automatically renew for one-year terms at a suggested retail price ("SRP"). Support service renewals are consistently priced and therefore would support the use of SRP as the best estimate of an SSP for such performance obligations.

Revenue Recognition

The Company recognizes revenues from product only sales at a point in time, when control over the product has transferred to the customer. As the Company's principal terms of sale are FOB shipping point, the Company primarily transfers control and records revenue for product only sales upon shipment.

A typical turnkey project involves the installation and integration of 200-300 rooms in a customer-controlled facility and usually takes sixty days to complete. Since control over goods and services transfers to a customer once a room is installed, the Company recognizes revenue for turnkey solutions over time. The Company uses an outputs measure based on the number of rooms installed to recognize revenues from turnkey solutions.

Revenues from support services are recognized over time, in even daily increments over the term of the contract, and are presented as "Recurring Revenue" in the Statement of Operations.

Contracts are billed in accordance with the terms and conditions, either at periodic intervals or upon substantial completion. This can result in billing occurring subsequent to revenue recognition, resulting in contract assets. Contract assets are presented as current assets in the Condensed Consolidated Balance Sheet.

Contract liabilities include deferrals for the monthly support service fees. Long-term contract liabilities represent support service fees that will be recognized as revenue after December 31, 2020.

Contract Fulfillment Cost

The Company recognizes related costs of the contract over time in relation to the revenue recognition. Costs included within the projects relate to the cost of material, direct labor and costs of outside services utilized to complete projects. These are presented as "Contract assets" in the consolidated balance sheets.

Sales Taxes

Unless provided with a resale or tax exemption certificate, the Company assesses and collects sales tax on sales transactions and records the amount as a liability. It is recognized as a liability until remitted to the applicable state. Total revenues do not include sales tax as the Company is considered a pass through conduit for collecting and remitting sales taxes.

Guarantees and Product Warranties

The Company records a liability for potential warranty claims in cost of sales at the time of sale. The amount of the liability is based on the trend in the historical ratio of claims to sales, the historical length of time between the sale and resulting warranty claim, new product introductions and other factors. The products sold are generally covered by a warranty for a period of one year. In the event the Company determines that its current or future product repair and replacement costs exceed its estimates, an adjustment to these reserves would be charged to earnings in the period such determination is made. For the years ended December 31, 2019 and 2018, the Company experienced returns of approximately 1% to 3% of material's included in cost of sales. As of December 31, 2019 and 2018, the Company recorded warranty liabilities in the amount of \$58,791 and \$46,103, respectively, using this experience factor range.

Product warranties for the years ended December 31 is as follows:

	2019	2018
Beginning balance	\$ 46,103	\$ 59,892
Warranty claims incurred	(66,803)	(28,000)
Provision charged to expense	79,491	14,211
Ending balance	<u>\$ 58,791</u>	<u>\$ 46,103</u>

Advertising

The Company follows the policy of charging the costs of advertising to expenses as incurred. The Company incurred \$54,945 and \$108,632 in advertising costs during the years ended December 31, 2019 and 2018, respectively.

Research and Development

The Company accounts for research and development costs in accordance with the ASC 730-10, "Research and Development". Under ASC 730-10, all research and development costs must be charged to expense as incurred. Accordingly, internal research and development costs are expensed as incurred. Third-party research and development costs are expensed when the contracted work has been performed or as milestone results have been achieved. Company-sponsored research and development costs related to both present and future products are expensed in the period incurred. Total expenditures on research and product development for 2019 and 2018 were \$1,737,385 and \$1,879,676, respectively.

Stock-Based Compensation

The Company accounts for stock-based awards in accordance with ASC 718-10, "Share-Based Compensation", which requires a fair value measurement and recognition of compensation expense for all share-based payment awards made to the Company's employees and directors, including employee stock options and restricted stock awards. The Company estimates the fair value of stock options granted using the Black-Scholes valuation model. This model requires the Company to make estimates and assumptions including, among other things, estimates regarding the length of time an employee will hold vested stock options before exercising them, the estimated volatility of the Company's common stock price and the number of options that will be forfeited prior to vesting. The fair value is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. Changes in these estimates and assumptions can materially affect the determination of the fair value of stock-based compensation and consequently, the related amount recognized in the Company's consolidated statements of operations.

The expected term of the options represents the estimated period of time until exercise and is based on historical experience of similar awards, giving consideration to the contractual terms, vesting schedules and expectations of future employee behavior. For 2018 and prior years, expected stock price volatility is based on the historical volatility of the Company's stock for the related expected term.

Stock-based compensation expense in connection with options granted to employees for the years ended December 31, 2019 and 2018 was \$7,262 and \$6,404, respectively.

NOTE B – NEW ACCOUNTING PRONOUNCEMENTS

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. ASU 2016-13 provides guidance for estimating credit losses on certain types of financial instruments, including trade receivables, by introducing an approach based on expected losses. The expected loss approach will require entities to incorporate considerations of historical information, current information and reasonable and supportable forecasts. ASU 2016-13 also amends the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit deterioration. The guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The guidance requires a modified retrospective transition method and early adoption is permitted.

In November 2019, FASB issued ASU No. 2019-10, Financial Instruments – Credit Losses, Derivatives and Hedging, and Leases (“ASU 2019-10”), which defers the adoption of ASU 2016-13 for smaller reporting companies until January 1, 2023. The Company will continue to evaluate the impact of ASU 2016-13 on its consolidated financial statements.

Management has evaluated other recently issued accounting pronouncements and does not believe any will have a significant impact on our consolidated financial statements and related disclosures.

Accounting Standards Recently Adopted

Effective January 1, 2019, the Company has adopted ASU 2016-02, Leases (“ASU 2016-02”), subsequently amended in 2018 by ASU 2018-10, ASU 2018-11 and ASU 2018-20 and codified in ASC 842, Leases (“ASC 842”). ASC 842 is effective for annual periods beginning after December 15, 2018 and interim periods thereafter. Earlier application was permitted, however the Company did not elect to do so. ASC 842 supersedes current lease guidance in ASC 840 and requires a lessee to recognize a right-of-use asset and a corresponding lease liability for substantially all leases. The lease liability will be equal to the present value of the remaining lease payments while the right-of-use asset will be similarly calculated and then adjusted for initial direct costs. In addition, ASC 842 expands the disclosure requirements to increase the transparency and comparability of the amount, timing and uncertainty of cash flows arising from leases.

The Company chose to elect available practical expedients permitted under the guidance, which among other items, allowed the Company to carry forward its historical lease classification to not reassess leases for the definition of lease under the new standard, and to not reassess initial direct costs for existing leases. Refer below for practical expedient package adopted:

- Whether expired or existing contracts contain leases under the new definition of the lease;
- Lease classification for expired or existing leases; and
- Whether previously capitalized initial direct costs would qualify for capitalization under ASC 842.

Upon the adoption of ASC 842, the Company elected to not recognize a right-of-use asset and related lease liability for leases with an initial term of 12 months or less as an accounting policy choice and elected to account for lease and non-lease components as a single lease component.

The Company elected to utilize the new alternative transition approach introduced by ASU 2018-11, under which the standard is adopted and measured from the first date of the fiscal year under adoption, in this case January 1, 2019. Comparative periods are presented in accordance with Topic 840 and do not include any retrospective adjustments to comparative periods to reflect the adoption of Topic 842.

As of December 31, 2019, \$0.9 million was included in total other assets, \$0.2 million in total current liabilities, and \$0.8 million in total long-term liabilities. There was no impact on our Condensed Consolidated Statements of Operations. Refer to Note M for further discussion.

NOTE C— REVENUE

The following table presents the Company's product and recurring revenues disaggregated by industry for the year ended December 31, 2019.

	Hospitality	Education	Multiple Dwelling Units	Government	Total
Product	\$ 8,570,225	\$ 1,038,660	\$ 564,811	\$ 1,039,158	\$ 11,212,854
Recurring	604,624	140,817	23,901	—	769,342
	<u>\$ 9,174,849</u>	<u>\$ 1,179,477</u>	<u>\$ 588,712</u>	<u>\$ 1,039,158</u>	<u>\$ 11,982,196</u>

The following table presents the Company's product and recurring revenues disaggregated by industry for the year ended December 31, 2018.

	Hospitality	Education	Multiple Dwelling Units	Government	Total
Product	\$ 6,410,615	\$ 652,019	\$ 472,462	\$ 81,319	\$ 7,616,415
Recurring	668,039	128,872	18,653	—	815,564
	<u>\$ 7,078,654</u>	<u>\$ 780,891</u>	<u>\$ 491,115</u>	<u>\$ 81,319</u>	<u>\$ 8,431,979</u>

Sales taxes and other usage-based taxes are excluded from revenues.

Remaining performance obligations

As of December 31, 2019, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately \$0.8 million. Except for support services, the Company expects to recognize 100% of the remaining performance obligations over the next six months. As of December 31, 2018, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately \$1.68 million.

Contract assets and liabilities

	2019	2018	Variance
Contract assets	\$ 188,120	\$ 314,749	\$ 126,629
Contract liabilities	764,184	1,232,623	(468,439)
Net contract liabilities	<u>\$ 576,064</u>	<u>\$ 917,874</u>	<u>\$ (341,810)</u>

Contracts are billed in accordance with the terms and conditions, either at periodic intervals or upon substantial completion. This can result in billing occurring subsequent to revenue recognition, resulting in contract assets. Contract assets are presented as current assets in the Condensed Consolidated Balance Sheet. There were approximately \$0.04 million of costs incurred to fulfill a contract in the closing balance of contract assets.

Often, the Company will require customers to pay a deposit upon contract signing that will be applied against work performed or products shipped. In addition, the Company will often invoice the full term of support at the start of the support period. Billings that occur prior to revenue recognition result in contract liabilities. The change in the contract liability balance during the 12 month period ended December 31, 2019 is the result of cash payments received and billing in advance of satisfying performance obligations.

Contract costs

Costs to fulfill a turnkey contract primarily relate to the materials cost and direct labor and are recognized proportionately as the performance obligation is satisfied. The Company will defer cost to fulfill a contract when materials have shipped (and control over the materials has transferred to the customer), but an insignificant amount of rooms have been installed. The Company will recognize any deferred costs in proportion to revenues recognized from the related turnkey contract. The Company does not expect deferred contract costs to be long-lived since a typical turnkey project takes sixty days to complete. Deferred contract costs are generally presented as other current assets in the condensed consolidated balance sheets.

The Company incurs incremental costs to obtain a contract in the form of sales commissions. These costs, whether related to performance obligations that extend beyond twelve months or not, are immaterial and will continue to be recognized in the period incurred within selling, general and administrative expenses.

NOTE D – ACCOUNTS RECEIVABLE

Components of accounts receivable as of December 31, 2019 and 2018 are as follows:

	2019	2018
Accounts receivable	\$ 2,338,626	\$ 1,146,832
Allowance for doubtful accounts	(55,039)	(65,541)
Accounts receivable, net	<u>\$ 2,283,587</u>	<u>\$ 1,081,291</u>

NOTE E – PROPERTY AND EQUIPMENT

The Company's property and equipment as of December 31, 2019 and 2018 consists of the following:

	2019	2018
Development test equipment	\$ 16,461	\$ 19,110
Computer software	76,134	76,134
Office equipment	66,685	61,367
Office fixtures and furniture	330,568	330,568
Leasehold improvements	18,016	18,016
Total	<u>507,864</u>	<u>505,195</u>
Accumulated depreciation and amortization	(321,339)	(257,906)
Total property and equipment	<u>\$ 186,525</u>	<u>\$ 247,289</u>

Depreciation and amortization expense included as a charge to income was \$66,082 and \$67,107 for the years ended December 31, 2019 and 2018, respectively.

NOTE F – ACCRUED LIABILITIES AND EXPENSES

Accrued liabilities and expenses as of December 31, 2019 and 2018 are as follows

	2019	2018
Accrued liabilities and expenses	\$ 214,925	\$ 325,855
Accrued payroll and payroll taxes	227,153	241,253
Accrued sales taxes, penalties, and interest	26,957	43,400
Product warranties	58,791	46,103
Total accrued liabilities and expenses	<u>\$ 527,826</u>	<u>\$ 656,611</u>

NOTE G – DEBT**Revolving Credit Facility**

On September 30, 2014, the Company entered into a loan and security agreement (the “Heritage Bank Loan Agreement”), with Heritage Bank of Commerce, a California state chartered bank (“Heritage Bank”), governing a revolving credit facility in a principal amount not to exceed \$2,000,000 (the “Credit Facility”). Availability of borrowings under the Credit Facility is subject to a borrowing base calculation based on the Company’s eligible accounts receivable and eligible inventory each multiplied by an applicable advance rate, with an overall limitation tied to the Company’s eligible accounts receivable. The Heritage Bank Loan Agreement is available for working capital and other general business purposes. The outstanding principal balance of the Credit Facility bears interest at the Prime Rate plus 3.00%, which was 7.75% at December 31, 2019 and 8.50% at December 31, 2018. On October 9, 2014, as part of the Heritage Bank Loan Agreement, Heritage Bank was granted a warrant to purchase 250,000 shares of Telkonet common stock, for further information on the accounting for warrants, refer to Note J. The warrant has an exercise price of \$0.20 and expires October 9, 2021. On November 6, 2019, the eleventh amendment to the Credit Facility was executed to extend the maturity date to September 30, 2021, unless earlier accelerated under the terms of the Heritage Bank Loan Agreement, and eliminate the maximum EBITDA loss covenant. The eleventh amendment was effective as of September 30, 2019.

The Heritage Bank Loan Agreement contains covenants that place restrictions on, among other things, the incurrence of debt, granting of liens and sale of assets. The Heritage Bank Loan Agreement also contains financial covenants. As discussed above, the EBITDA loss covenant was eliminated in the eleventh amendment to the Credit Facility. The sole financial covenants are a minimum asset coverage ratio and a minimum unrestricted cash balance of \$2 million, both of which are measured at the end of each month. A violation of any of these covenants could result in an event of default under the Heritage Bank Loan Agreement. Upon the occurrence of such an event of default or certain other customary events of defaults, payment of any outstanding amounts under the Credit Facility may be accelerated and Heritage Bank’s commitment to extend credit under the Heritage Bank Loan Agreement may be terminated. The Heritage Bank Loan Agreement contains other representations and warranties, covenants, and other provisions customary to transactions of this nature.

The outstanding balance on the Credit Facility was \$624,347 and \$121,474 at December 31, 2019 and 2018 and the remaining available borrowing capacity was approximately \$424,000 and \$499,000, respectively. As of December 31, 2019, the Company was in compliance with all financial covenants.

NOTE H – PREFERRED STOCK

Series A

The Company has authorized 215 shares of preferred stock as Series A Preferred Stock (“Series A”). Each share of Series A is convertible, at the option of the holder thereof, at any time, into shares of the Company’s common stock at a conversion price of \$0.363 per share. On November 16, 2009, the Company sold 215 shares of Series A with attached warrants to purchase an aggregate of 1,628,800 shares of the Company’s common stock at \$0.33 per share. The Series A shares were sold at a price per share of \$5,000 and each Series A share is convertible into approximately 13,774 shares of common stock at a conversion price of \$0.363 per share. The Company received \$1,075,000 from the sale of the Series A shares. In prior years, 30 of the preferred shares issued on November 16, 2009 were converted to shares of the Company’s common stock. In a prior year, the redemption feature available to the Series A holders expired.

Series B

The Company has authorized 567 shares of preferred stock as Series B Preferred Stock (“Series B”). Each share of Series B is convertible, at the option of the holder thereof, at any time, into shares of the Company’s common stock at a conversion price of \$0.13 per share. On August 4, 2010, the Company sold 267 shares of Series B with attached warrants to purchase an aggregate of 5,134,626 shares of the Company’s common stock at \$0.13 per share. The Series B shares were sold at a price per share of \$5,000 and each Series B share was convertible into approximately 38,461 shares of common stock at a conversion price of \$0.13 per share. The Company received \$1,335,000 from the sale of the Series B shares on August 4, 2010. On April 8, 2011, the Company sold 271 additional shares of Series B with attached warrants to purchase an aggregate of 5,211,542 shares of the Company’s common stock at \$0.13 per share. The Series B shares were sold at a price per share of \$5,000 and each Series B share was convertible into approximately 38,461 shares of common stock at a conversion price of \$0.13 per share. The Company received \$1,355,000 from the sale of the Series B shares on April 8, 2011. In prior years, 486 of the preferred shares issued on August 4, 2010 and April 8, 2011 were converted to shares of the Company’s common stock. In a prior year, the redemption feature available to the Series B holders expired.

Preferred stock carries certain preference rights as detailed in the Company’s Amended Articles of Incorporation related to both the payment of dividends and as to payments upon liquidation in preference to any other class or series of capital stock of the Company. As of December 31, 2019, the liquidation preference of the preferred stock is based on the following order: first, Series B with a preference value of \$455,904, which includes cumulative accrued unpaid dividends of \$195,904, and second, Series A with a preference value of \$1,674,195, which includes cumulative accrued unpaid dividends of \$749,195. As of December 31, 2018, the liquidation preference of the preferred stock is based on the following order: first, Series B with a preference value of \$435,081, which includes cumulative accrued unpaid dividends of \$175,081, and second, Series A with a preference value of \$1,600,168, which includes cumulative accrued unpaid dividends of \$675,168.

NOTE I – CAPITAL STOCK

The Company has authorized 15,000,000 shares of preferred stock, with a par value of \$.001 per share. The Company has authorized 215 shares as Series A preferred stock and 567 shares as Series B preferred stock. At December 31, 2019 and 2018, there were 185 shares of Series A and 52 shares of Series B outstanding, respectively.

The Company has authorized 190,000,000 shares of common stock with a par value of \$.001 per share. As of December 31, 2019 and 2018, the Company had 135,990,491 and 134,793,211 common shares issued and outstanding, respectively.

During the years ended December 31, 2019 and 2018, the Company issued 1,197,280 and 1,098,100 shares of common stock, respectively to directors for services performed during 2019 and 2018. These shares were valued at \$132,000 and \$144,000, respectively, which approximated the fair value of the shares when they were issued.

During the years ended December 31, 2019 and 2018, no warrants were exercised. These warrants were originally granted to shareholders of the April 8, 2011 Series B preferred stock issuance.

During the years ended December 31, 2019 and 2018, no shares of Series A or B preferred stock were converted to shares of common stock.

NOTE J – STOCK OPTIONS AND WARRANTS

Employee Stock Options

The Company maintains an equity incentive plan (the “Plan”). The Plan was established in 2010 as an incentive plan for officers, employees, non-employee directors, prospective employees and other key persons. The Plan is administered by the Board of Directors or the compensation committee, which is comprised of not less than two non-employee directors who are independent. A total of 10,000,000 shares of stock were reserved and available for issuance under the Plan. The exercise price per share for the stock covered by a stock option granted shall be determined by the administrator at the time of grant but shall not be less than 100 percent of the fair market value on the date of grant. The term of each stock option shall be fixed by the administrator, but no stock option shall be exercisable more than ten years after the date the stock option is granted. As of December 31, 2019, there were approximately 409,269 shares remaining for issuance in the Plan.

It is anticipated that providing such persons with a direct stake in the Company’s welfare will assure a better alignment of their interests with those of the Company and its stockholders.

The following table summarizes the changes in options outstanding and the related prices for the shares of the Company’s common stock issued to employees of the Company under the Plan as of December 31, 2019.

Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$0.01 - \$0.15	2,000,000	7.01	\$ 0.14	2,000,000	\$ 0.14
\$0.16 - \$1.00	1,349,793	3.84	0.18	1,208,631	0.18
	<u>3,349,793</u>	5.73	\$ 0.16	<u>3,208,631</u>	\$ 0.16

Transactions involving stock options issued to employees are summarized as follows:

	Number of Shares	Weighted Average Exercise Price Per Share
Outstanding at January 1, 2018	4,376,474	\$ 0.16
Granted	67,394	0.17
Exercised	-	-
Cancelled or expired	(1,094,075)	0.14
Outstanding at December 31, 2018	3,349,793	\$ 0.16
Granted	-	-
Exercised	-	-
Cancelled or expired	-	-
Outstanding at December 31, 2019	3,349,793	\$ 0.16

The expected life of awards granted represents the period of time that they are expected to be outstanding. The Company determines the expected life based on historical experience with similar awards, giving consideration to the contractual terms, vesting schedules, exercise patterns and pre-vesting and post-vesting forfeitures. The Company estimates the volatility of the Company's common stock based on the calculated historical volatility of the Company's common stock using the share price data for the trailing period equal to the expected term prior to the date of the award. The Company bases the risk-free interest rate used in the Black-Scholes option valuation model on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term equal to the expected life of the award. The Company has not paid any cash dividends on the Company's common stock and does not anticipate paying any cash dividends in the foreseeable future. Consequently, the Company uses an expected dividend yield of zero in the Black-Scholes option valuation model. The Company uses historical data to estimate pre-vesting option forfeitures and records share-based compensation for those awards that are expected to vest. In accordance with ASC 718-10, the Company calculates share-based compensation for changes to the estimate of expected equity award forfeitures based on actual forfeiture experience.

The following table summarizes the assumptions used to estimate the fair value of options granted during the year ended December 2018, using the Black-Scholes option-pricing model:

	2018
Expected life of option (years)	10
Risk-free interest rate	2.80%
Assumed volatility	87%
Expected dividend rate	0
Expected forfeiture rate	65%

There were no options granted in the year ended December 31, 2019.

The total estimated fair value of the options granted during the years ended December 31, 2019 and 2018 was \$0 and \$244. The total fair value of underlying shares related to options that vested during the years ended December 31, 2019 and 2018 was \$8,174 and \$6,811. Future compensation expense related to non-vested options at December 31, 2019 was \$11,178 and will be recognized over the next 2.0 years. The aggregate intrinsic value of the vested options was zero as of December 31, 2019 and 2018. During the year ended December 31, 2019, no options were granted, exercised, cancelled or expired. For the year ended December 31, 2018, no options were granted or exercised and there were 1,094,075 options that were cancelled or expired. Total stock-based compensation expense in connection with options granted to employees recognized in the condensed consolidated statements of operations for the years ended December 31, 2019 and 2018 was \$7,262, and \$6,405, respectively.

Warrants

The following table summarizes the changes in warrants outstanding and the related exercise prices for the warrants issued to the debt holder in relation to the revolving credit facility, see Note G.

Exercise Prices	Warrants Outstanding			Warrants Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ 0.20	250,000	1.77	\$ 0.20	250,000	\$ 0.20

Transactions involving warrants are summarized as follows:

	Number of Shares	Weighted Average Exercise Price Per Share
Outstanding at January 1, 2018	250,000	\$ 0.20
Issued	-	-
Exercised	-	-
Cancelled or expired	-	0.20
Outstanding at December 31, 2018	250,000	\$ 0.20
Issued	-	-
Exercised	-	-
Cancelled or expired	-	-
Outstanding at December 31, 2019	250,000	\$ 0.20

There were no warrants granted, exercised, cancelled or forfeited during the years ended December 31, 2019 and 2018.

NOTE K – STOCK ISSUANCE TO NON-EMPLOYEE DIRECTORS

During the years ended December 31, 2019 and 2018, the Company issued common stock in the amount of \$132,000 and \$144,000 and pay cash consideration of \$20,000 and \$0, respectively to the Company's non-employee directors as compensation for their attendance and participation in the Company's Board of Director and committee meetings.

NOTE L – INCOME TAXES

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the “Tax Act”). The Tax Act makes broad and complex changes to the U.S. tax code, including, but not limited to, the following that impact the Company: (1) reducing the U.S. federal corporate income tax rate from 35 percent to 21 percent; (2) eliminating the corporate alternative minimum tax; (3) creating a new limitation on deductible interest expense; (4) limiting the deductibility of certain executive compensation; and (5) limiting certain other deductions.

The Company follows ASC 740-10 “Income Taxes” which requires the recognition of deferred tax liabilities and assets for the expected future tax consequences of events that have been included in the financial statement or tax returns. Under this method, deferred tax liabilities and assets are determined based on the difference between financial statements and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse.

A reconciliation of tax expense computed at the statutory federal tax rate on loss from operations before income taxes to the actual income tax (benefit) /expense is as follows:

	2019	2018
Tax benefit computed at the statutory rate	\$ (427,244)	\$ (631,497)
State taxes	6,525	6,874
Book expenses not deductible for tax purposes	2,980	2,882
Rate Change	45,656	–
Other	2,517	(27,286)
	(369,566)	(649,027)
Change in valuation allowance for deferred tax assets	269,203	658,650
Income tax (benefit) expense	<u>\$ (100,363)</u>	<u>\$ 9,623</u>

Deferred income taxes include the net tax effects of net operating loss (NOL) carry forwards and the temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets are as follows:

	2019	2018
Deferred Tax Assets:		
Net operating loss carry forwards	\$ 20,772,428	\$ 20,342,559
Intangibles	207,618	318,178
Credits	28,022	112,086
Other	506,349	613,202
Total deferred tax assets	<u>21,514,417</u>	<u>21,386,025</u>
Deferred Tax Liabilities:		
Intangibles	–	–
Total deferred tax liabilities	–	–
Valuation allowance	(21,486,396)	(21,386,025)
Net deferred tax asset	<u>\$ 28,021</u>	<u>\$ –</u>

A valuation allowance is recorded when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of the deferred tax assets depends on the ability of the Company to generate sufficient taxable income of the appropriate character in the future and in the appropriate taxing jurisdictions. As of December 31, 2019 and December 31, 2018, the Company's valuation allowance, established for the tax benefit that may not be realized, totaled approximately \$21,490,000 and \$21,390,000, respectively. The overall increase in the valuation allowance is related to insignificant fluctuations in the temporary differences and federal and state net operating losses.

At December 31, 2019 the Company had net operating loss carryforwards of approximately \$92,900,000 and \$22,000,000 for federal and state income tax purposes which will expire at various dates from 2020 – 2039.

The Company's NOL and tax credit carryovers may be significantly limited under Section 382 of the Internal Revenue Code (IRC). NOL and tax credit carryovers are limited under Section 382 when there is a significant "ownership change" as defined in the IRC. During 2005 and in prior years, the Company may have experienced such ownership changes that could have imposed such limitations.

The limitation imposed by Section 382 would place an annual limitation on the amount of NOL and tax credit carryovers that can be utilized. When the Company completes the necessary studies, the amount of NOL carryovers available may be reduced significantly. However, since the valuation allowance fully reserves for all available carryovers, the effect of the reduction would be offset by a reduction in the valuation allowance.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is generally no longer subject to U.S. federal income tax examinations by tax authorities for years before 2015 and various states before 2015. Although these years are no longer subject to examination by the Internal Revenue Service (IRS) and various state taxing authorities, net operating loss carryforwards generated in those years may still be adjusted upon examination by the IRS or state taxing authorities if they have been or will be used in a future period.

The Company follows the provisions of uncertain tax positions as addressed in FASB Accounting Standards Codification 740-10-65-1. The Company recognized no change in the liability for unrecognized tax benefits. The Company has no tax positions at December 31, 2019 or 2018 for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. The Company recognizes interest accrued related to unrecognized tax benefits in interest expense and penalties in operating expense. No such interest or penalties were recognized during the periods presented. The Company had no accruals for interest and penalties at December 31, 2019 or 2018. The Company's utilization of any net operating loss carryforwards may be unlikely due to its continuing losses.

NOTE M – COMMITMENTS AND CONTINGENCIES

Office Leases Obligations

In October 2013, the Company entered into a lease agreement for 6,362 square feet of commercial office space in Waukesha, Wisconsin for its corporate headquarters. The Waukesha lease would have expired in April 2021, but was subsequently amended and extended through April 2026. On April 7, 2017 the Company executed an amendment to its' existing lease in Waukesha, Wisconsin to expand another 3,982 square feet, bringing the total leased space to 10,344 square feet. In addition, the lease term was extended from May 1, 2021 to April 30, 2026. The commencement date for this amendment was July 15, 2017.

In January 2016, the Company entered into a lease agreement for 2,237 square feet of commercial office space in Germantown, Maryland for its Maryland employees. The Germantown lease as amended was set to expire at the end of January 2018. In November 2017, the Company entered into a second amendment to the lease agreement extending the lease through the end of January 2019. In November 2018, the Company entered into a third amendment to the lease agreement extending the lease through the end of January 2022.

In May 2017, the Company entered into a lease agreement for 5,838 square feet of floor space in Waukesha, Wisconsin for its inventory warehousing operations. The Waukesha lease expires in May 2024.

On January 1, 2019 the Company adopted ASC Topic 842 “Leases” (“ASC 842”), which supersedes ASC Topic 840 “Leases” (“ASC 840”), using the alternative transition method of adoption. The Company has recognized and measured all leases that exist as at January 1, 2019 (the effective date) using a modified retrospective transition approach. Comparative periods are presented in accordance with Topic 840 and do not include any retrospective adjustments to comparative periods to reflect the adoption of Topic 842. Any cumulative-effect adjustments to retained earnings is recognized as of January 1, 2019. Upon adoption, we recognized our leases with greater than one year in duration on the balance sheet as right-of-use assets and lease liabilities. For income statement purposes, the FASB retained a dual model, requiring leases to be classified as either operating or finance. Classification is based on criteria that are largely similar to those applied in prior lease accounting, but without explicit lines. We have made certain assumptions in judgments when applying ASC 842. Those judgments of most significance are as follows:

- We elected the package of practical expedients available for transition which allow us to not reassess the following:
 - o Whether expired or existing contracts contain leases under the new definition of the lease;
 - o Lease classification for expired or existing leases; and
 - o Whether previously capitalized initial direct costs would qualify for capitalization under ASC 842.
- We did not elect to use hindsight for transition when considering judgments and estimates such as assessments of lessee options to extend or terminate a lease or purchase the underlying asset.
- For all asset classes, we elected to not recognize a right-of-use asset and lease liability for leases with a term of 12 months or less.
- For all asset classes, we elected to not separate non-lease components from lease components to which they relate and have accounted for the combined lease and non-lease components as a single lease component.

We determine if an arrangement is a lease at inception. Operating leases are included in our consolidated balance sheet as right-of-use assets, operating lease liabilities - current and operating lease liabilities – long term. Upon adoption, the Company determined there were no financing leases. Our current operating leases are for facilities and office equipment. Our leases may contain renewal options; however, we do not recognize right-of-use assets or lease liabilities for renewal periods unless it is determined that we are reasonably certain of renewing the lease at inception or when a triggering event occurs. Some of our lease agreements may contain rent escalation clauses, rent holidays, capital improvement funding, or other lease concessions. We recognize our minimum rental expense on a straight-line basis based on the fixed components of a lease arrangement. Payments are set on a pre-determined schedule within each lease agreement. We amortize this expense over the term of the lease beginning with the date of the standard adoption for current leases and beginning with the date of initial possession, which is the date we enter the leased space and begin to make improvements in the preparation for its intended use, for future leases. Variable lease components represent amounts that are not fixed in nature and are not tied to an index or rate, and are recognized as incurred. Variable lease components consist primarily of common area maintenance, taxes and insurance.

The Company does not, upon adoption of ASC 842, control a specific space or underlying asset used in providing a service by a third-party service provider, under any third party service agreements. There are no such arrangements that meet the definition under ASC 842.

In determining our right-of-use assets and lease liabilities, we apply a discount rate to the minimum lease payments within each lease agreement. ASC 842 requires us to use the rate of interest that a lessee would have to pay to borrow on a collateralized basis over a similar term, an amount equal to the lease payments in a similar economic environment. When we cannot readily determine the discount rate implicit in the lease agreement, we utilize our current borrowing rate on our outstanding line of credit. The Company's line of credit utilizes market rates to assess an interest rate. Refer to Note F for further discussion.

We lease certain property under non-cancelable operating leases, primarily facilities. The impact of the adoption of ASC 842 at January 1, 2019 created a right-of-use asset of \$1,042,004, lease liability of \$1,095,761 and unwound the \$71,877 balance of the deferred lease liability account.

The components of lease expense for the year ended December 31, 2019 were as follows:

Operating lease expense:		
Operating lease cost - fixed	\$	237,900
Variable lease cost		118,198
Total operating lease cost	\$	<u>356,098</u>

Other information related to leases as of December 31, 2019 was as follows:

Operating lease liability - current	\$	223,835
Operating lease liability - long-term	\$	758,315
Operating cash outflows from operating leases	\$	219,798
Weighted-average remaining lease term of operating leases		5.6 years
Weighted-average discount rate of operating leases		8.5%

Future annual minimum operating lease payments as of December 31, 2019 were as follows:

2020	\$	223,835
2021		242,299
2022		195,176
2023		193,169
2024 and thereafter		<u>384,119</u>
Total minimum lease payments		1,238,598
Less imputed interest		<u>(256,448)</u>
Total	\$	<u>982,150</u>

Future annual minimum lease payments under non-cancelable leases as of December 31, 2018 prior to our adoption of ASU 2016-02, Leases (Topic 842) are as follows:

2019	\$	211,448
2020		223,417
2021		242,785
2022		195,176
2023		193,168
2024 and thereafter		380,714
Total	\$	<u>1,446,708</u>

Rental expenses charged to operations for the years ended December 31, 2019 and 2018 was \$356,098 and \$342,975, respectively.

Employment and Consulting Agreements

The Company has employment agreements with certain of its key employees which include non-disclosure and confidentiality provisions for protection of the Company's proprietary information.

Jason L. Tienor, President and Chief Executive Officer, is employed pursuant to an employment agreement with us dated October 1, 2018. Mr. Tienor's employment agreement has a term of two (2) years, which will automatically renew for a period of an additional twelve (12) months up to two times, and provides for a base salary of \$222,800 per year and bonuses and benefits based upon the Company's internal policies and participation in the Company's incentive and benefit plans. The agreement also calls for a bonus to be paid upon the sale of the Company. The bonus will be equal to \$20,000 if The Company's shares are valued at minimum \$0.20 per share, \$35,000 if shares are valued at minimum \$0.225 per share, or \$50,000 if shares are valued at minimum \$0.25 per share. If sale price exceeds \$0.25 per share, Mr. Tienor is eligible to receive an additional \$6,000 for every \$0.01 above a share price of \$0.25.

Jeffrey J. Sobieski, Chief Technology Officer, is employed pursuant to an employment agreement with us dated October 1, 2018. Mr. Sobieski's employment agreement has a term of two (2) years, which will automatically renew for a period of an additional twelve (12) months up to two times, and provides for a base salary of \$211,625 per year and bonuses and benefits based upon the Company's internal policies and participation in the Company's incentive and benefit plans. The agreement also calls for a bonus to be paid upon the sale of the Company. The bonus will be equal to \$20,000 if the Company's shares are valued at minimum \$0.20 per share, \$35,000 if shares are valued at minimum \$0.225 per share, or \$50,000 if shares are valued at minimum \$0.25 per share. If sale price exceeds \$0.25 per share, Mr. Sobieski is eligible to receive an additional \$6,000 for every \$0.01 above a share price of \$0.25.

Richard E. Mushrush, Chief Financial Officer, is employed pursuant to an employment agreement with us dated October 1, 2018. Mr. Mushrush's employment agreement has a term of two (2) years, which will automatically renew for a period of an additional twelve (12) months up to two times, and provides for a base salary of \$122,000 per year and bonuses and benefits based upon the Company's internal policies and participation in the Company's incentive and benefit plans. The agreement also calls for a bonus to be paid upon the sale of the Company. The bonus will be equal to \$20,000 if the Company's shares are valued at minimum \$0.20 per share, \$35,000 if shares are valued at minimum \$0.225 per share, or \$50,000 if shares are valued at minimum \$0.25 per share. If sale price exceeds \$0.25 per share, Mr. Mushrush is eligible to receive an additional \$6,000 for every \$0.01 above a share price of \$0.25.

In addition to the foregoing, stock options are periodically granted to employees under the Company's 2010 equity incentive plan at the discretion of the Compensation Committee of the Board of Directors. Executives of the Company are eligible to receive stock option grants, based upon individual performance and the performance of the Company as a whole.

Litigation

The Company is subject to legal proceedings and claims which arise in the ordinary course of its business. Although occasional adverse decisions or settlements may occur, the Company believes that the final disposition of such matters should not have a material adverse effect on its financial position, results of operations or liquidity.

Indemnification Agreements

On March 31, 2010, the Company entered into Indemnification Agreements with executives Jason L. Tienor, President and Chief Executive Officer and Jeffrey J. Sobieski, then Chief Operating Officer. On April 24, 2012, the Company entered into an Indemnification Agreement with director Tim S. Ledwick. On July 1, 2016, the Company entered into Indemnification Agreements with director's Arthur E. Byrnes, Peter T. Kross and Leland D. Blatt. On January 1, 2017, the Company entered into an Indemnification Agreement with Chief Financial Officer Richard E. Mushrush.

The Indemnification Agreements provide that the Company will indemnify the Company's officers and directors, to the fullest extent permitted by law, relating to, resulting from or arising out of any threatened, pending or completed action, suit or proceeding, or any inquiry or investigation by reason of the fact that such officer or director (i) is or was a director, officer, employee or agent of the Company or (ii) is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. In addition, the Indemnification Agreements provide that the Company will make an advance payment of expenses to any officer or director who has entered into an Indemnification Agreement, in order to cover a claim relating to any fact or occurrence arising from or relating to events or occurrences specified in this paragraph, subject to receipt of an undertaking by or on behalf of such officer or director to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Company as authorized under the Indemnification Agreement.

Sales Taxes

Unless provided with a resale or tax exemption certificate, the Company assesses and collects sales tax on sales transactions and records the amount as a liability. It is recognized as a liability until remitted to the applicable state. Total revenues do not include sales tax as the Company is considered a pass through conduit for collecting and remitting sales taxes.

The following table sets forth the change in the sales tax accrual during the years ended December 31:

	2019	2018
Balance, beginning of year	\$ 43,400	\$ 83,282
Sales tax collected	167,233	101,144
Provisions (reversals)	(10,664)	30,465
Payments	(173,012)	(171,491)
Balance, end of year	<u>\$ 26,957</u>	<u>\$ 43,400</u>

NOTE N – BUSINESS CONCENTRATION

For the year ended December 31, 2019, there were two customers that each represented 13% of total net revenues. For the year ended December 31, 2018, no single customer represented 10% or more of the Company's total net revenues.

As of December 31, 2019, two customers represented 26% and 10% of the Company's net accounts receivable. As of December 31, 2018, two customers represented 29% and 11% of the Company's net accounts receivable.

Purchases from one supplier approximated \$3,356,000, or 84%, of total purchases for the year ended December 31, 2019 and approximately \$3,622,000, or 81%, of total purchases for the year ended December 31, 2018. The amount due to this supplier, net of deposits paid, was approximately \$579,000 as of December 31, 2019. Deposits paid to this vendor were in excess of total accounts payable due to this supplier in the amount of \$320,352 as of December 31, 2018.

NOTE O – EMPLOYEE BENEFIT PLAN

The Company has an employee savings plan covering substantially all employees who are at least 21 years of age and have completed at least 3 months of service. The plan provides for matching contributions equal to 100% of each dollar contributed by the employee up to 4% of the employee's salary. The Company's matching contributions vest immediately. The Company may also elect to make discretionary contributions. The Company made contributions to the plan of approximately \$126,000 and \$116,000 for the years ended December 31, 2019 and 2018, respectively.

NOTE P – SUBSEQUENT EVENT

On January 30, 2020 the World Health Organization ("WHO") announced a global health emergency because of a new strain of a novel coronavirus in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of operations. In March 2020, the World Health Organization classified the COVID-19 outbreak a pandemic, based on the rapid increase in exposure globally. The spread of the COVID-19 outbreak has caused significant volatility and uncertainty in U.S. and international markets. The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such it is uncertain as to the full magnitude that the COVID-19 outbreak will have on the Company's financial condition, liquidity, and future results of operations.

The COVID-19 outbreak has resulted in and could continue to result in reduced demand for our products and/or cause customers to be unable to meet payment obligations to the Company. The industries that the Company operates in have already been impacted with shelter-in-place directives, school closures, visitor restrictions, travel restrictions, heightened border scrutiny and event cancellations which will materially affect sales levels for fiscal year 2020 and the Company's overall liquidity. The Company has been informed by some clientele that planned capital expenditures have been suspended until further notice.

The COVID-19 outbreak could adversely affect our supply chain and production capabilities of our primary product supplier located in China, due to quarantines, worker absenteeism, facility closures, and/or increased international trade restrictions or regulations. If any of our supply chain phases were interrupted or terminated, we could experience delays in our project fulfillment process. Delays could result in increased fulfillment costs, customer pricing concessions, or overall project cancellations.

The Company is dependent on its workforce to deliver our products and services. Developments such as social distancing, shelter-in-place directives, furloughs, worker absenteeism, and travel restrictions will impact the Company's ability to deploy its workforce effectively. While expected to be temporary, prolonged workforce disruptions will negatively impact sales levels for fiscal year 2020 and the Company's overall liquidity.

In response to the continuing uncertainty resulting from a novel coronavirus, we have implemented and are continuing to review strategic cost reduction strategies across all functional areas. At this time, the disruption is expected to be temporary; however, the length or severity of this pandemic is unknown. Management is actively monitoring the impact of the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. While we expect this disruption to have a material adverse impact on our results of operations, financial condition and cash flows for the year 2020, the Company is unable to reasonably determine the impact at this time.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

As of December 31, 2019, Telkonet, Inc., a Utah corporation (the "Company," "we," or "our"), had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): Common Stock, \$0.001 par value (our "Common Stock").

The following is a brief description of our Common Stock and does not purport to be complete. The description is qualified in its entirety by reference to the Company's Amended and Restated Articles of Incorporation, as amended (our "Articles") and Bylaws (our "Bylaws"), each of which are incorporated by reference as exhibits to the Annual Report on Form 10-K for the year ended December 31, 2019 of which this Exhibit 4.4 is a part, and the applicable provisions of the Utah Revised Business Corporation Act (the "Utah Corporation Act") and the Utah Control Shares Acquisition Act (the "Utah Control Shares Act"), together with the Utah Corporation Act, the "Utah Acts"). We encourage you to read our Articles, our Bylaws, and the Utah Acts for additional information.

DESCRIPTION OF CAPITAL STOCK

General

The Company's authorized capital stock consists of 190,000,000 shares of our Common Stock and 15,000,000 shares of preferred stock, par value \$0.001 per share, 215 shares of which have been designated as Series A Preferred Stock (our "Series A Preferred Stock") and 567 of which have been designated as Series B Preferred Stock (our "Series B Preferred Stock"), together with our Series A Preferred Stock, our "Preferred Stock"). As of December 31, 2019, 135,990,491 shares of our Common Stock, 185 shares of our Series A Preferred Stock, and 52 shares of our Series B Preferred Stock were issued and outstanding.

Common Stock

Voting Rights

Generally, the holders of our Series A Preferred Stock and our Series B Preferred Stock each vote on an as-converted basis together with the holders of our Common Stock as a single class. Each share of our Common Stock is entitled to one vote on all matters submitted to stockholders of the Company for a vote. Each share of Preferred Stock is entitled to the number of votes equal to the number of whole shares of our Common Stock into which such share of Preferred Stock is convertible. As of December 31, 2019, each share of Series A Preferred Stock and Series B Preferred Stock was convertible into 13,774 and 38,461 shares of our Common Stock, respectively. Generally, matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes cast. Neither the holders of our Common Stock nor the holders of our Preferred Stock have cumulative voting rights.

Dividends and Liquidation

Subject to the rights of the holders of our Preferred Stock (as described below) and any preferential rights of any outstanding shares of any other preferred stock, if any, dividends may be paid on our Common Stock from legally available funds, when and if declared by the Company's Board of Directors (the "Board"). Upon liquidation, dissolution, or winding up of the Company, after payment in full of the amounts required to be paid to holders of our Preferred Stock (as described below) and any outstanding shares of any other preferred stock, if any, all holders of our Common Stock are entitled to share ratably in any assets available for distribution.

Our Preferred Stock carries certain preference rights as detailed in our Articles related to both the payment of dividends and payments upon liquidation in preference to any other class or series of capital stock of the Company. As of December 31, 2019, the liquidation preference of our Preferred Stock was based on the following order: first, our Series B Preferred Stock with a preference value of \$455,904, which includes cumulative accrued unpaid dividends of \$195,904, and second, our Series A Preferred Stock with a preference value of \$1,674,195, which includes cumulative accrued unpaid dividends of \$749,195.

Conversion

The holders of our Common Stock have no rights to convert their Common Stock into any other securities. The holders of our Preferred Stock have the right to convert each share of Preferred Stock they own to our Common Stock at any time. As of December 31, 2019, each share of Series A Preferred Stock was convertible into 13,774 shares of our Common Stock (based on a conversion price of \$0.363), and each share of Series A Preferred Stock was convertible into 38,461 shares of our Common Stock (based on a conversion price of \$0.13).

Other Rights

The holders of our Common Stock have no preemptive rights. There are no redemption or sinking fund provisions applicable to the Common Stock.

Fully Paid and Non-Assessable

All of the outstanding shares of our Common Stock are fully paid and nonassessable.

Listing

Our Common Stock is listed on the OTCQB Venture Market under the ticker symbol “TKOI.”

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Broadridge Corporate Issuer Solutions, Inc.

Preferred Stock

Our Articles authorize the Board to issue from time to time up to an aggregate of 15,000,000 shares of preferred stock in one or more series without further stockholder approval. The Board is authorized, without further stockholder approval, to fix or alter the designations, preferences, rights and any qualifications, limitations or restrictions of the shares of each such series thereof, including the dividend rights, dividend rates, conversion rights, voting rights, terms of redemption (including sinking fund provisions), redemption price or prices, liquidation preferences and the number of shares constituting any series or designations of such series. Also, the issuance of preferred stock could decrease the amount of earnings and assets available for distribution to holders of our Common Stock.

Certain Effects of Authorized, but Unissued Stock

The Company may issue additional stock, including our Common Stock and preferred stock, from time to time upon such terms and for such consideration as may be determined by our Board. Generally, the issuance of our Common Stock and preferred stock, up to respective the aggregate amounts authorized by our Articles, will not require approval by the Company's stockholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which the Company's securities may be listed or traded at the time of such issuance. Furthermore, and as discussed below, the existence of unissued and unreserved Common Stock and preferred stock may enable the Board to issue shares to persons who are friendly to current management, which could discourage an attempt to obtain control of the Company by means of a proxy contest, tender offer, merger, or otherwise.

Anti-Takeover Effects of Certain Provisions in Our Articles, Our Bylaws, and the Utah Control Shares Act

Provisions in Our Articles and Our Bylaws

Certain provisions contained in our Articles and our Bylaws could result in the delay of or otherwise discourage transactions involving an actual or potential change in control of the Company or its management and may limit the ability of the Company's stockholders to remove current management or approve transactions that the Company's stockholders may deem to be in their best interests. These provisions include, among others:

- **Size of Board:** The size of the Board is determined by the Board, provided that the number of directors must be at least three and no more than fifteen persons.
- **Director Vacancies:** Vacancies on the Board, including vacancies resulting from enlargement of the Board, but excluding vacancies occurring by reason of the removal of a director without cause (which are filled by a vote of the stockholders), are filled by a majority of directors then in office, even if less than a quorum remains on the Board.
- **No Cumulative Voting:** The holders of our Common Stock and our Preferred Stock are not entitled to cumulative voting rights.
- **Issuance of Additional Stock:** The Board has the power to issue additional stock, including the authority to establish one or more additional series of preferred stock and to fix the powers, preferences, rights, and limitations of such series, and generally may do so without seeking stockholder approval.
- **Advance Notice Requirements for Stockholder Action:** Our Bylaws contain provisions requiring advance notice be delivered to the Company of any business to be brought by a stockholder before an annual meeting and providing for procedures to be followed by stockholders in nominating persons for election to the Board. Further, our Bylaws limit consideration by stockholders at annual meetings to only those proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board or by one or more stockholders in accordance with the procedural requirements in our Bylaws.

Anti-Takeover Provisions of the Utah Control Shares Act

We are subject to the Utah Control Shares Act, as set forth in Section 61-6-1, et seq., of the Utah Code. The Control Shares Act provides that any person or entity that acquires "control shares" of an "issuing public corporation" in a "control share acquisition" is denied voting rights with respect to the acquired shares, unless a majority of the disinterested stockholders of the issuing public corporation elects to restore such voting rights. The Control Shares Act provides that a person or entity acquires "control shares" whenever it acquires shares that, but for the operation of the Control Shares Act, would bring its voting power following such acquisition within any of the following three ranges of all voting power of the issuing public corporation: (i) between 1/5 and 1/3; (ii) between 1/3 and a majority; or (iii) a majority or more.

For purposes of the Control Shares Act, an “issuing public corporation” is any corporation other than a depository institution, that is organized under the laws of the state of Utah and that has:

- 100 or more stockholders;
- its principal place of business, principal office or substantial assets within the state; and
- one of the following:
 - more than 10% of its stockholders are residents in the state;
 - more than 10% of its shares are owned by Utah residents; or
 - 10,000 stockholders are resident in the state.

A “control share acquisition” is generally defined as the direct or indirect acquisition (including through a series of acquisitions) of either ownership or voting power associated with issued and outstanding control shares. The acquisition of any shares of an issuing public corporation does not constitute a control share acquisition if the acquisition is consummated, among others, in any of the following circumstances:

- pursuant to the laws of descent and distribution;
- pursuant to the satisfaction of a pledge or other security interest created in good faith and not for the purpose of circumventing the Control Shares Act;
- pursuant to a direct issue by or transfer from the issuing public corporation of its own shares, except that shares issued or transferred upon the conversion of a convertible security or upon exercising an option, warrant, or other right to purchase shares constitutes a control share acquisition unless the convertible security, option, warrant, or other right was acquired directly from the issuing public corporation by the acquiring person; or
- pursuant to a merger or plan of share exchange effected in compliance with a merger, share exchange or sale of all or substantially all of the assets of the corporation under applicable provisions of Utah law, if the issuing public corporation is a party to the agreement of merger or plan of share exchange.

Under the Control Shares Act, a person or entity that acquires control shares pursuant to a control share acquisition acquires voting rights with respect to those shares only to the extent granted by a majority of the disinterested stockholders of each class of capital stock outstanding prior to the acquisition. The acquiring person may file an “acquiring person statement” with the issuing public corporation setting forth the number of shares acquired and certain other specified information. Upon delivering the statement together with an undertaking to pay the issuing public corporation’s expenses of a special stockholders’ meeting, the issuing public corporation is required to call a special stockholders’ meeting for the purpose of considering the voting rights to be accorded to the shares acquired or to be acquired in the control shares acquisition. If no request for a special meeting is made, the voting rights to be accorded to the control shares are to be presented at the issuing public corporation’s next special or annual meeting of stockholders.

If either (i) the acquiring person does not file an acquiring person statement with the issuing public corporation or (ii) the stockholders do not vote to restore voting rights to the control shares, the issuing public corporation may, if its articles of incorporation or bylaws so provide, redeem the control shares from the acquiring person at fair market value. Our Articles and Bylaws do not currently provide for such a redemption right. Unless otherwise provided in the articles of incorporation or bylaws of an issuing public corporation, all stockholders are entitled to dissenters' rights if the control shares are accorded full voting rights and the acquiring person has obtained majority or more control shares. Our Articles of Incorporation and Bylaws do not currently deny such dissenters' rights.

The directors or stockholders of a corporation may elect to exempt the stock of the corporation from the provisions of the Control Shares Act through adoption of a provision to that effect in the corporation's articles of incorporation or bylaws. To be effective, such an exemption must be adopted prior to the control shares acquisition. Our stockholders have not yet taken any such action.

We expect the Control Shares Act to have an anti-takeover effect with respect to transactions our Board does not approve in advance. The Control Shares Act may also discourage takeover attempts that might result in a premium over the market price for the shares of our Common Stock held by our stockholders.

**THIRD AMENDMENT
TO
LOAN AND SECURITY AGREEMENT**

This Third Amendment to Loan and Security Agreement is entered into as of January 25, 2017 (the "Amendment"), by and among TELKONET, INC. and ETHOSTREAM LLC (together, "Borrowers" and each, a "Borrower"), and HERITAGE BANK OF COMMERCE ("Bank").

RECITALS

Borrowers and Bank are parties to that certain Loan and Security Agreement dated as of September 30, 2014 and as amended from time to time, including pursuant to that certain First Amendment to Loan and Security Agreement dated as of February 17, 2016 and that certain Second Amendment to Loan and Security Agreement dated as of October 27, 2016 (collectively, the "Agreement"). Borrowers have requested, and Bank has agreed, to waive certain Events of Default under the Agreement, as set forth herein.

AGREEMENT

NOW, THEREFORE, the parties agree as follows:

1. Section 6.3(b) of the Agreement is amended and restated in its entirety to read as follows:
 - (b) within five (5) days of the 15th day and last day of each month, aged listing of accounts payable and a customer deposit listing;
2. Section 6.3(i) of the Agreement is amended and restated in its entirety to read as follows:
 - (i) within fifteen (15) days after the last day of each month, bank statement's listing the balances and activity in Borrowers' Wells Fargo Accounts;
3. Section 6.3(j) of the Agreement is amended and restated in its entirety to read as follows:
 - (j) within fifteen (15) days after the last day of each month, an inventory report and a list of Offsite Inventory.
4. The following is added as new subsection (1) to the end of Section 6.3 of the Agreement:
 - (1) within fifteen (15) days of the end of each calendar quarter, a deferred revenue schedule.
5. Section 6.9(b) of the Agreement is amended and restated in its entirety to read as follows:
 - (b) EBITDA. Measured as of the end of each fiscal quarter, Borrowers shall achieve a year-to-date EBITDA of at least seventy percent (70%) of its projected EBITDA set forth in Borrower's board approved financial projections delivered to Bank in accordance with Section 6.3(f), which amounts, for the quarters listed below, are set forth below:

Fiscal Quarter Ending	Projected Year-to-Date EBITDA	70% of Projected Year-to-Date EBITDA
March 31, 2017	\$34,599	\$24,219
June 30, 2017	\$169,044	\$118,331
September 30, 2017	\$380,618	\$266,432
December 31, 2017	\$527,804	\$369,463

Notwithstanding the foregoing, if Borrowers deviate from its projected EBITDA by an amount that is less than \$100,000, Borrowers shall be deemed in compliance with this Section 6.9(b).

6. Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct as of the date of this Amendment, and that no Event of Default has occurred and is continuing.

7. Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

8. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original hereof.

9. As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

- (a) the original signed Amendment and all other Loan Documents being executed in connection herewith, duly executed by Borrower;
- (b) payment of an amount equal to all Bank Expenses incurred through the date of this Amendment; and
- (c) such other documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

TELKONET, INC.

By: /s/ Jason L. Tienor

Name: Jason L. Tienor

Title: CEO

ETHOSTREAM LLC

By: /s/ Jason L. Tienor

Name: Jason L. Tienor

Title: CEO

HERITAGE BANK OF COMMERCE

By: _____

Name: _____

Title: _____

EXHIBIT D
COMPLIANCE CERTIFICATE

TO: HERITAGE BANK OF COMMERCE
FROM: TELKONET, INC. and ETHOSTREAM LLC

The undersigned authorized officer of Telkonet, Inc., on behalf of all Borrowers, hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "Agreement"), (i) Borrower is in complete compliance for the period ending _____ with all required covenants except as noted below and (ii) all representations and warranties of Borrower stated in the Agreement are true and correct as of the date hereof. Attached herewith are the required documents supporting the above certification. The Officer further certifies that these are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes.

Please indicate compliance status by circling Yes/No under "Complies" column.

Reporting Covenant

	<u>Required</u>	<u>Complies</u>
Borrower prepared financial statements	Quarterly within 45 days	Yes No
Compliance Certificate	Quarterly within 45 days	Yes No
Wells Fargo bank statements	Monthly within 15 days	Yes No
AIR & A/P Agings	Within 5 days of 15 th and last day of each month	Yes No
Customer deposit listing	Within 5 days of 15 th and last day of each month	Yes No
Borrowing base certificate	Within 5 days of 15 th and last day of each month	Yes No
Inventory report	Monthly within 15 days	Yes No
Offsite Inventory listing	Monthly within 15 days	Yes No
Deferred revenue schedule	Quarterly within 15 days	Yes No
Annual financial statements (CPA Audited)	FYE within 120 days	Yes No
Annual financial projections and budget	Annual within 30 days before FYE	Yes No
Federal Tax Returns	Annual, within 15 days of filing	Yes No
10K and 10Q	(as applicable)	Yes No
A/R Audit	Initial and semi-annual	Yes No
IP Notices	As required under Section 6.10	Yes No

Financial Covenant

	<u>Required</u>	<u>Actual</u>	<u>Complies</u>
Minimum Asset Coverage Ratio (Monthly)	1.25: 1.00	_____:1.00	Yes No
Minimum YTD EBITDA (Negative deviation from board approved financial projections not to exceed 30% or \$100,000; quarterly)		\$ _____	Yes No

Comments Regarding Exceptions: See Attached.

Sincerely,

SIGNATURE

TITLE

DATE

BANK USE ONLY	
Received by: _____	AUTHORIZED SIGNER
Date: _____	
Verified: _____	AUTHORIZED SIGNER
Date: _____	
Compliance Status	Yes No

FOURTH AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This Fourth Amendment to Loan and Security Agreement is entered into as of March 29, 2017 (the "Amendment"), by and among TELKONET, INC. and ETHOSTREAM LLC (together, "Borrowers" and each, a "Borrower"), and HERITAGE BANK OF COMMERCE ("Bank").

RECITALS

Borrowers and Bank are parties to that certain Loan and Security Agreement dated as of September 30, 2014 and as amended from time to time, including pursuant to that certain First Amendment to Loan and Security Agreement dated as of February 17, 2016, that certain Second Amendment to Loan and Security Agreement dated as of October 27, 2016 and that certain Third Amendment to Loan and Security Agreement dated as of January 25, 2017 (collectively, the "Agreement"). Following the sale of certain assets of Ethostream, LLC (to which Bank has separately provided its consent), Borrowers have requested, and Bank has agreed, to amend the Agreement in accordance with the terms set forth herein.

AGREEMENT

NOW, THEREFORE, the parties agree as follows:

1. Section 6.9(b) of the Agreement is amended and restated in its entirety to read as follows:

(b) EBITDA. Measured as of the end of each fiscal quarter, the maximum year-to-date EBITDA loss for Telkonet, Inc. shall not exceed the amounts set forth below:

Fiscal Quarter Ending	Year-to-Date EBITDA Loss
March 31, 2017	(\$845,000)
June 30, 2017	(\$1,486,000)
September 30, 2017	(\$2,023,000)
December 31, 2017	(\$2,651,000)

Notwithstanding the foregoing, if Telkonet, Inc. deviates from its projected EBITDA by an amount that is less than \$100,000, Borrowers shall be deemed in compliance with this Section 6.9(b).

2. Borrowers represent and warrant that the representations and warranties contained in the Agreement are true and correct as of the date of this Amendment, and that no Event of Default has occurred and is continuing,

3. Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Each Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

4. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original hereof.

5. As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

- (a) the original signed Amendment and all other Loan Documents being executed in connection herewith, duly executed by Borrowers;
- (b) payment of an amendment fee in the amount of \$5,000 plus all Bank Expenses incurred through the date of this Amendment; and
- (c) such other documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the first date above written.

TELKONET, INC.

By: /s/ Jason L. Tienor

Name: Jason L. Tienor

Title: CEO

ETHOSTREAM LLC

By: /s/ Jason L. Tienor

Name: Jason L. Tienor

Title: CEO

HERITAGE BANK OF COMMERCE

By: /s/ Karla Schrader

Name: Karla Schrader

Title: VP

**EXHIBIT D
COMPLIANCE CERTIFICATE**

TO: HERITAGE BANK OF COMMERCE
FROM: TELKONET, INC. and ETHOSTREAM LLC

The undersigned authorized officer of Telkonet, Inc., on behalf of all Borrowers, hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement between Borrower and Bank (the "Agreement"), (i) Borrower is in complete compliance for the period ending _____ with all required covenants except as noted below and (ii) all representations and warranties of Borrower stated in the Agreement are true and correct as of the date hereof. Attached herewith are the required documents supporting the above certification. The Officer further certifies that these are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes.

Please indicate compliance status by circling Yes/No under "Complies" column.

Reporting Covenant

	<u>Required</u>	<u>Complies</u>
Borrower prepared financial statements	Quarterly within 45 days	Yes No
Compliance Certificate	Quarterly within 45 days	Yes No
Wells Fargo bank statements	Monthly within 15 days	Yes No
AIR & A/P Agings	Within 5 days of 15 th and last day of each month	Yes No
Customer deposit listing	Within 5 days of 15 th and last day of each month	Yes No
Borrowing base certificate	Within 5 days of 15 th and last day of each month	Yes No
Inventory report	Monthly within 15 days	Yes No
Offsite Inventory listing	Monthly within 15 days	Yes No
Deferred revenue schedule	Quarterly within 15 days	Yes No
Annual financial statements (CPA Audited)	FYE within 120 days	Yes No
Annual financial projections and budget	Annual within 30 days before FYE	Yes No
Federal Tax Returns	Annual, within 15 days of filing	Yes No
10K and 10Q	(as applicable)	Yes No
A/R Audit	Initial and semi-annual	Yes No
IP Notices	As required under Section 6.10	Yes No

Financial Covenant

	<u>Required</u>	<u>Actual</u>	<u>Complies</u>
Minimum Asset Coverage Ratio (Monthly)	1.25: 1.00	_____:1.00	Yes No
Telkonet, Inc. YTD EBITDA Loss as of			
March 31, 2017	(\$845,000)	\$ _____	Yes No
June 30, 2017	(\$1,486,000)	\$ _____	Yes No
September 30, 2017	(\$2,023,000)	\$ _____	Yes No
December 31, 2017	(\$2,651,000)	\$ _____	Yes No

Comments Regarding Exceptions: See Attached.

Sincerely,

SIGNATURE

TITLE

DATE

BANK USE ONLY	
Received by:	_____ AUTHORIZED SIGNER
Date:	_____
Verified:	_____ AUTHORIZED SIGNER
Date:	_____
Compliance Status	Yes No

FIFTH AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This Fifth Amendment to Loan and Security Agreement is entered into as of August 29, 2017 (the "Amendment"), by and among TELKONET, INC. ("Borrower"), and HERITAGE BANK OF COMMERCE ("Bank").

RECITALS

Borrower and Bank are parties to that certain Loan and Security Agreement dated as of September 30, 2014 and as amended from time to time, including pursuant to that certain First Amendment to Loan and Security Agreement dated as of February 17, 2016, that certain Second Amendment to Loan and Security Agreement dated as of October 27, 2016, that certain Third Amendment to Loan and Security Agreement dated as of January 25, 2017 and that certain Fourth Amendment to Loan and Security Agreement dated as of March 29, 2017 (collectively, the "Agreement").

AGREEMENT

NOW, THEREFORE, the parties agree as follows:

1. The following definitions are added or amended and restated in its entirety to read as follows:

"Credit Card Sublimit" means a sublimit for credit card transactions under the Revolving Line not to exceed One Hundred Thousand Dollars (\$100,000).

"Credit Extension" means each Advance, use of the Credit Card Sublimit or any other extension of credit by Bank for the benefit of Borrower hereunder.

2. The first sentence in Section 2.1(a)(i) of the Agreement is amended and restated in its entirety to read as follows:

(i) Subject to and upon the terms and conditions of this Agreement, Borrower may request Advances in an aggregate outstanding amount not to exceed the lesser of (i) the Revolving Line or (ii) the Borrowing Base, minus, in each case the Tax Reserve and the amount of Credit Card Services being provided under the Credit Card Sublimit.

3. The following is added as a new subsection (b) to the end of Section 2.1 of the Agreement:

(i) Credit Card Sublimit. Subject to the terms and conditions of this Agreement and availability under the Revolving Line and the Borrowing Base, Borrower may request business credit cards and other related services (the "Credit Card Services") by delivering to Bank such applications on Bank's standard forms as requested by Bank; provided, however, that the total amount of the Credit Card Services shall not exceed the Credit Card Sublimit, and that availability under the Revolving Line shall be reduced by the entire amount of the Credit Card Services being provided hereunder. In addition, Bank may, in its sole discretion, charge as Advances any amounts that become due or owing to Bank in connection with the Credit Card Services. If at any time the Revolving Facility is terminated or otherwise ceases to exist, Borrower shall immediately secure its obligations with respect to any Credit Card Services with cash collateral in such amounts as Bank may require, and, effective as of such date, the balance in any deposit accounts held by Bank and the certificates of deposit issued by Bank in Borrower's name (and any interest paid thereon or proceeds thereof, including any amounts payable upon the maturity or liquidation of such certificates), shall automatically secure such obligations to the extent of the then outstanding Credit Card Services. Borrower authorizes Bank to hold such balances in pledge and to decline to honor any drafts thereon or any requests by Borrower or any other Person to pay or otherwise transfer any part of such balances for so long as the Credit Card Services continue.

4. Subsection (d) to Section 5.5 is amended and restated in its entirety to read as follows:

(d) is located at Borrower's headquarters or such other Borrower-operated facility as to which Bank has received a landlord waiver, inventory holder's acknowledgement or other waiver or written acknowledgement in the form satisfactory to Bank (except that Inventory subject to a contract between Borrower and a customer under which contract Borrower retains ownership of such Inventory ("Offsite Inventory"), may be located at such customer's location provided that such Offsite Inventory does not exceed \$225,000 in the aggregate at any time).

5. Exhibit C is replaced in its entirety with Exhibit C attached hereto.

6. Borrower represents and warrants that the representations and warranties contained in the Agreement are true and correct as of the date of this Amendment, and that no Event of Default has occurred and is continuing.

7. Unless otherwise defined, all initially capitalized terms in this Amendment shall be as defined in the Agreement. The Agreement, as amended hereby, shall be and remain in full force and effect in accordance with its respective terms and hereby is ratified and confirmed in all respects. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment of, any right, power, or remedy of Bank under the Agreement, as in effect prior to the date hereof. Borrower ratifies and reaffirms the continuing effectiveness of all agreements entered into in connection with the Agreement.

8. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original hereof.

9. As a condition to the effectiveness of this Amendment, Bank shall have received, in form and substance satisfactory to Bank, the following:

- (a) the original signed Amendment and all other Loan Documents being executed in connection herewith, duly executed by Borrower;
- (b) payment of an amount equal to all Bank Expenses incurred through the date of this Amendment; and
- (c) such other documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

[SIGNATURE PAGE FOLLOWS]

TELKONET, INC.

By: /s/ Gene Mushrush

Name: Gene Mushrush

Title: CFO

HERITAGE BANK OF COMMERCE

By: /s/ Karla Schrader

Name: Karla Schrader

Title: VP

Exhibit C
BORROWING BASE CERTIFICATE

Borrowers: Telkonet, Inc. and EthoStream LLC	Lender: HERITAGE BANK OF COMMERCE
Commitment Amount: \$2,000,000	Loan #:

	<u>Period:</u>	
	X/X/XX	
ACCOUNTS RECEIVABLE		
1 Accounts Receivable Book Value as of:		<u>\$0.00</u>
2 Total Accounts Receivable:		<u>\$0.00</u>
ACCOUNTS RECEIVABLE DEDUCTIONS		
3 Accounts Receivable Aged over 90 Days from invoice date Contra Accounts (including		<u>\$0.00</u>
4 Customer's Related Deposits)		<u>\$0.00</u>
5 Concentration	<u>30%</u>	<u>\$0.00</u>
6 Cross aging over	<u>25%</u>	<u>\$0.00</u>
7 Foreign Accounts (Net of >90s, w/out Insurance or LC)		<u>\$0.00</u>
8 Government Accounts (Net of >90s)		<u>\$0.00</u>
9 Affiliate /Employee Accounts (Net of >90s)		<u>\$0.00</u>
10 Related Party Transactions		<u>\$0.00</u>
11 Consumer Accounts		<u>\$0.00</u>
12 Over 90 Credits		<u>\$0.00</u>
13 Other Deductions: Progress Billings, Pre-Billings, Bonded Projects, Retentions		<u>\$0.00</u>
14 Total Ineligible Accounts:		<u>\$0.00</u>
15 Total Eligible Accounts (#2 — #14)		<u>\$0.00</u>
16 Advance Rate		<u>80%</u>
17 Borrowing Base (#15 multiplied by #16)		<u>\$0.00</u>
INVENTORY		
18 Total Value of Inventory		<u>\$0.00</u>
19 Less Ineligible Inventory		<u>\$0.00</u>
20 Total Eligible Inventory		<u>\$0.00</u>
Eligible Inventory Advance		
21 Rate		<u>25%</u>
22 Available Eligible Inventory (the lessor of \$600,000 or #20 x #21)		<u>\$0.00</u>
BALANCES		
23 Maximum Loan Amount		<u>\$2,000,000</u>
24 Total Borrowing Base [Lesser of #17 + #22 or \$2,000,000]		<u>\$0.00</u>
25 Less: Present Balance owing on Line of Credit		<u>\$0.00</u>
26 Less: Cash Management Services (up to \$100,000)		<u>\$0.00</u>
Less: Other balances, i.e., Tax Reserve (as defined in the Loan and Security		
27 Agreement)		<u>\$0.00</u>
28 Less: Funding Request Today		<u>\$0.00</u>
29 Remaining Availability [#24 — (#25 through #28)]		<u>\$0.00</u>

If line #29 is a negative number, this amount must be remitted to the Bank immediately to bring loan balance into compliance. By signing this form you authorize Bank to deduct any advance amounts directly from the company's checking account at HERITAGE BANK OF COMMERCE in the event there is an overadvance.

The undersigned represents and warrants that the foregoing is true, complete and correct, and that the information reflected in this Borrowing Base Certificate complies with the representations and warranties set forth in the Loan and Security Agreement between the undersigned and HERITAGE BANK OF COMMERCE.

Each Borrower hereby requests funding in the amount of \$_____ in accordance with this Borrowing Base Certificate. All representations and warranties of Borrowers stated in the Loan and Security Agreement are true, correct, and complete in all material respects as of the date of this Borrowing Base Certificate; provided that those representations and warranties expressly referring to another date shall be true, correct, and complete in all material respects as of such date.

By (Authorized Signer):

Title:

Date:

Reviewed by Bank:

Title:

Date:



Tel: 608-836-7500
Fax: 608-836-7505
www.bdo.com

One Erdman Place, Suite 404
Madison, WI 53717

Consent of Independent Registered Public Accounting Firm

Telkonet, Inc.
Waukesha, Wisconsin

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-161909 and 333-175737) of Telkonet, Inc. of our report dated March 30, 2020, relating to the consolidated financial statements, which appear in this Form 10-K. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ BDO USA, LLP

BDO USA, LLP
Milwaukee, WI
March 30, 2020

CERTIFICATIONS

I, Jason L. Tienor, certify that:

1. I have reviewed this annual report on Form 10-K of Telkonet, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2020

By: /s/ Jason L. Tienor
Jason L. Tienor
Chief Executive Officer

CERTIFICATIONS

I, Gene Mushrush, certify that:

1. I have reviewed this annual report on Form 10-K of Telkonet, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 30, 2020

By: /s/ Gene Mushrush
Gene Mushrush
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Telkonet, Inc. (the "Company") on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jason L. Tienor, Chief Executive Officer of Telkonet, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Jason L. Tienor
Jason L. Tienor
Chief Executive Officer
March 30, 2020

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Telkonet, Inc. (the "Company") on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gene Mushrush, Chief Financial Officer of Telkonet, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Gene Mushrush
Gene Mushrush
Chief Financial Officer
March 30, 2020