

## A Global Opportunity: WindStream's 2014 Roadmap

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WindStream Technologies (OTCQB: WSTI)

Topics Covered:

- Jamaica and Caribbean development
- India strategy and manufacturing
- Saudi Arabia and our strategic partner
- Africa -- lighting the continent
- Latin America's rural electrification goals
- United States Military Net Zero objectives
- Global manufacturing goals
- Future product developments

WindStream Technologies (WTI) is looking forward to 2014, a year of growth for the Company and its products. The Company has established very good relationships with its distributors and customers and has identified significant volume projects all over the world, which are in various stages ranging from pilot programs to full-fledged rollouts. In building its near-term business opportunities, WTI has focused primarily on two markets: where energy is expensive and where energy is inconsistent or non-existent. More than 1.7 billion<sup>1</sup> people in the world live without a connection to a power grid. Developing economies worldwide are desperately trying to connect these "un-connected" citizens through a variety of programs for rural electrification. Energy rates are escalating all over the world with very little relief in sight. While the U.S. may be benefitting from the boom in natural gas exploration, this new source of energy is not rippling through to countries that lack access to this finite fossil fuel resource. These two vast markets have taken the Company's products all over the world.

In order to meet the growing demand for its products the Company has begun diversifying its manufacturing capabilities by establishing capacity in territories that could generate large-volume sales. The following pages will define these sales and distribution channels and the Company's strategy for expanding its operations worldwide.

### ***Jamaica and the Caribbean:***

WindStream started off the year with a large purchase order from Jamaica Public Service (JPS), the billion dollar national utility of Jamaica. This contract calls for \$14.5 million of products to begin delivery in Q1 of 2014. With energy rates at greater than \$0.43 per kWh, compared to a U.S. average rate as published by the U.S. Energy Information Administration of \$0.12 per kWh, the SolarMill product line offers a very compelling solution to customers of JPS. SolarMills offset the cost of energy with renewables while reducing the demand on the JPS generation and distribution infrastructure. JPS now offers the WTI products to its customers as a direct sale through its chain of eStores as well as advertising the products on national television. JPS offers direct sales to its customers through its retail outlets and it is also developing potentially attractive financing solutions that can be added to a customer's electric bill, easing the initial cost of ownership and potentially further driving sales. A sample of the JPS marketing efforts can be found at the following links:

No More Fuel Charges: <https://www.youtube.com/watch?v=82lJqkfywuo>

Easy to Own a SolarMill from the eStore: <https://www.youtube.com/watch?v=8cX0KvVKErI>

Take Control of High Fuel Costs with Energy Solutions from the eStore: <https://www.youtube.com/watch?v=2AmQa0c2dK4>

Why Choose a SolarMill: <https://www.youtube.com/watch?v=GDva4eTWeh8>

In addition to marketing to the residential customer, JPS has also begun marketing the SolarMill products as a B2B solution throughout the country. Large installations are being sold by the Company ranging from 10kW to 300kW.

But why is JPS selling renewable energy products to its customers, potentially cannibalizing its own business model?

As discussed with senior management, JPS is looking to the future and assessing how best to reduce the cost of energy. The island of Jamaica must import almost all of its fuel for energy generation, and the costs of fuel and transportation continue to rise. To meet growing demand, JPS will need to diversify its fuel sources as well as building newer, more efficient generating units. As Jamaica enjoys abundant sunshine and wind, renewable energy generation provides a strategic advantage. Moreover, the government also has a policy to grow the renewable energy portfolio significantly in its 2030 vision statement. At \$0.43 per kWh and rising, energy costs in general and electricity in particular command a disproportionate share of the household and operational budgets. The sale and distribution of a "point of use" renewable energy solution such as the SolarMill allows JPS to provide its customers with an economical way of reducing energy costs while providing a new revenue stream for the Company.

In addition to these sales, there is a plan under consideration that could potentially expand the sale of products to the Jamaican consumers of energy. This plan is a leasing/power purchase model much like that offered in the United States by traditional solar companies. If implemented, the customer would install a SolarMill system on his or her rooftop and pay a reduced rate for energy produced onsite for a seven-year period. After that time frame, the customer may purchase the equipment from JPS and continue benefiting from the generation of clean renewable energy for the duration of the product's effective life, estimated at greater than 20 years. JPS generates revenues on the financing of the products over time, on the sale of energy, and on the buyout, and it reduces its generation need for current customers. This allows the utility to move its traditionally-generated power to other areas of the country where it is needed. If this plan is finalized, JPS has indicated the rollout may potentially be greater than 20MW per year for four years. If we are successful in executing this contract and are able to secure the needed capital to fulfill this large order, at current rates, this could potentially result in greater than \$120 million of revenue to WindStream.

Not only did JPS decide to become the distributor of WTI's products in Jamaica, but due to the overwhelming response to the products, JPS asked for and was granted the exclusive right to distribute SolarMills throughout the Caribbean. Using the access and credibility of the Caribbean's largest utility company as a springboard, WTI and JPS are currently moving forward in order to replicate the business models defined above in other countries that have the same high cost of energy and need to develop alternative sources.

### **India**

With a land mass one-third that of the United States, but a population three times greater, India offers a potentially massive market for WindStream and its products. Additionally, the Indian market is energy challenged, making a low-cost efficient solution such as the SolarMill even more attractive. It is estimated that 30% or 400 million of the country's population do not have access to grid-supplied power and those who do experience regular blackouts or limited access to energy throughout the day.<sup>2</sup>

The Indian government has mandated that manufacturers that derive their power from fossil fuels must offset 5% of that energy use with renewable sources.<sup>3</sup>

This mandate has led to a rush by manufacturers to find cost-effective solutions to the government initiative. WTI has recently completed a successful pilot in India for ACC Limited. As one of the largest cement manufacturers in South Asia, with revenues greater than \$1 billion, ACC tested the Company's products at its facility in Thondebavi in early 2013 and concluded that the SolarMill was a cost-effective way of meeting its fossil fuel offset requirement. This pilot led to a commitment from ACC to deploy 3MW of products across its twelve plants. The deployment of these products is slated to begin in Q2 of 2014. ACC, one of the most prominent companies in India, is highly regarded as a thought leader in the field of sustainability and sustainable business practices, and as such, we believe this project will be the model that other manufacturers, subject to the same fossil fuel mandate, may follow throughout India. WTI expects to maximize this success with a marketing campaign that will further drive sales of its products to other manufacturers that must meet the same challenges that the government has imposed.

WTI is currently working on another material project in India with Bharat Broadband Network Limited (BBNL)<sup>4</sup>. BBNL has been charged by the Indian Government to establish a network of connectivity to 250,000 villages and communities throughout India. This \$4 billion project is now at the pilot stage and 250 test sites are being established. From these pilots, BBNL will have a clear understanding of which products should be deployed in order to meet the goals of this ambitious effort.<sup>5</sup>

These deployments are typically in rural areas of the country where energy is scarce or non-existent. If our BBNL pilot is successful, it is in these remote locations that BBNL could recommend the use of the WTI products. The energy generated would be used as the means of charging the batteries that will ultimately provide the power to run the internet-networked devices that make up the BBNL connected vision. WindStream currently is slated to be a part of these early trials to begin in Q2 of 2014.

The fisheries/aquaculture industry in India is also an area of focus for WTI and potentially represents a material market for the Company's products. Ponds and tanks are the prime resources for freshwater aquaculture in India. Aquaculture in India is an \$11 billion industry that has a critical need for reliable power. Fishery farmers must keep their farms and ponds aerated with a constant flow of water or their product dies. These farms are located throughout 8,118 kilometers of marine coastline of India and many are in remote locations. While many of these huge establishments are connected to the grid, often they are provided only eight hours of energy or less per day. During the hours when electricity is not available, farmers must rely on diesel generators to keep their inventory alive. Diesel generators, as a backup source for power, are very expensive to own and operate and are a very dirty source of energy. WTI is in discussions with farmers to provide them with clean energy solutions to power the equipment required to keep their product alive and healthy.

We believe supplementing this energy need with SolarMills will be a win-win for the farmer and WTI. Initial discussions with this sector have taken place and are continuing toward possible contracts.

The Indian Government has launched many initiatives for rural electrification which lead to the "public good" and "quality of life" improvements that are being carried out by national and regional governments all over the country. With 400 million people living off grid and another 300 million with sporadic power at best, there is a national effort to bring affordable energy solutions to the people of India. In order to participate in these immense projects, WTI will have to obtain certification by these appropriate technical agencies. WindStream is in the process of acquiring these certifications from the Ministry of New and Renewable Energy (MNRE)<sup>6</sup> and the Center for Wind Energy Technologies (CWET)<sup>7</sup>. The Company expects to have the required certifications by Q2 of 2014. Once certified, the SolarMill and its associated products will be eligible to be included as an authorized product for use within any government-promoted initiatives. Additionally, customers of the products will be eligible for the government incentives offered for the use of renewable energy products.

### **Saudi Arabia**

WindStream is proud to announce that it has recently established a distribution agreement with Riyadh Renewables (RR), a new company formed to bring renewable energy to Saudi Arabia and the Gulf Cooperation Council (GCC) countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

The partnership with Riyadh Renewables holds great potential for WTI as fossil fuel producing nations throughout the GCC migrate to the use of renewable energy.

Riyadh Renewables is not only the exclusive distributor of the WTI products for the GCC, but it is also an equity partner of WindStream. Riyadh Renewables is owned by a member of the royal family of Saudi Arabia and as such is extending its influence and credibility in securing projects throughout the region.

We are honored to have a partner of this stature working with WTI throughout the region.

Riyadh Renewables will market and sell WTI's products that will include B2B sales and government contracts in Saudi Arabia and neighboring countries.

Projects being contemplated range in scope from rural electrification and urban deployments to street lighting and more. Countries throughout the region are experiencing explosive growth and as a result the demand for energy is rising. This growth is driving governments towards the use of renewable energy rather than relying on fossil fuels. In Saudi Arabia, the King Abdullah Centre for Atomic and Renewable Energy (KACARE) has mandated that by 2032 renewable energy generation in Saudi Arabia will meet or exceed 16 GW from Solar PV to provide approximately 28 to 35 TWh/yr and 9 GW from wind power.<sup>8</sup>

This mandate and the new partnership with Riyadh Renewables creates a substantial opportunity for our Company in the GCC.

### ***GCC Opportunity Defined***

Riyadh Renewables, WindStream's exclusive distributor for the GCC, will be making sales efforts in this ever expanding territory.

The data below indicates that the GCC is fully committed to the deployment of renewable energy and Riyadh Renewables is well positioned to help meet this growing demand.

According to a July 2013 report from the International Renewable Energy Agency, Middle East investment in renewable energy projects rose 40% in 2013 to \$2.9B, and could reach as much as \$13B within the next few years. Energy consumption per capita in GCC countries is expected to rise at an annual rate of 2.5% through 2035 with the largest energy consumption in the area of residential use.<sup>9</sup>

Kuwait is currently aiming to get at least 15% of its energy needs met via renewable energy sources by the year 2030 -- with the country's aim being to eventually move away from its dependency on oil. Not a surprising goal, nor one unique for the region -- Saudi Arabia, Qatar, Oman, Bahrain, and the UAE have all made their renewable energy goals publicly known.<sup>10</sup>

Of the six GCC countries, Saudi Arabia leads the group with the most expansive plan to increase generating capacity from 55 GW to 120 GW by 2020 and further increases planned by 2032. Renewable energy comprises 55 GW of the planned 2020 capacity with 41 GW allocated for solar.<sup>11</sup>

In the United Arab Emirates, investment in renewable energy technologies is primarily driven through the Masdar initiative, a company focused on developing sustainable and renewable energy in Abu Dhabi. The Abu Dhabi Government committed to a 7% goal of renewable energy by 2020 while Dubai has set a goal of 6% solar generation by 2030.<sup>12</sup>

Qatar, a country relying almost solely on natural gas, is the highest per capita greenhouse gas emitter in the world. The country has set a goal of 200 MW of generation from solar by 2020.<sup>13</sup>

In 2013, the Bahraini Cabinet approved a plan to establish a center for renewable energy and energy efficiency. Further to their progress and planning, their first 5 MW solar project was commissioned at the end of 2013 and another project is in the works.<sup>14</sup>

Oman has a nascent renewable energy sector, with several projects making progress in 2013. In its 2012 Annual Report, Oman's Rural Areas Electricity Company detailed five renewable electricity projects of which three are solar and two are wind. The combined capacity of the five projects is over 6 megawatts, but none of the proposed facilities are ready to begin operations.<sup>15</sup>

### ***Africa***

The entire continent of Africa needs power. Regardless of the location, there is a lack of available, stable, grid-supplied energy. This material need has resulted in a keen focus by WTI on how to establish relationships and distribution channels to begin providing its products to this vast market.

The Obama Administration has also recognized the need for providing power to the continent and has established the "Power Africa" initiative, a \$7 billion effort to bring energy to the continent. According to the Power Africa website:

Two out of three sub-Saharan Africans or 600 million people, lack access to electricity, forcing them to spend significant amounts of their income on costly and unhealthy forms of energy like diesel to run factory generators and smoky and scarce wood for indoor fires for cooking... Power Africa will start by working with African governments, the private sector, and other partners such as the World Bank and African Development Bank in six focus countries -- Ethiopia, Ghana, Kenya, Liberia, Nigeria and Tanzania -- to add more than 10,000 megawatts (MW) of clean, efficient electricity generation capacity. By expanding mini-grid and off-grid solutions and building out power generation, transmission, and distribution structures, Power Africa will make electricity access available for 20 million people and commercial entities. At the same time, Power Africa will enhance energy resource management capabilities, allowing partner countries to meet their critical energy needs and achieve sustainable, long-term energy security.<sup>16</sup>

WTI has worked to establish relationships and is now in the process of setting up its first trials in Kenya, Nigeria, Ghana, and Liberia with additional countries signing up for pilot projects. The Company believes it will see growth in these markets if the pilot projects are successful. Coupled with its partners in Africa, WindStream intends to access the needed capital for deployments from governments and local partners and from the funds available through the USAID and Power Africa initiatives.

### ***Latin America***

WindStream has completed the formation of a Latin American wholly-owned subsidiary, WindStream Technologies Latin America (WTI LatAM), which is designed to service the countries in Central and South America. The company was set up in Lima, Peru, with the intent of establishing not only a general Latin American presence, but a specific Peruvian one that can bid on government projects for rural electrification.

The first project that WindStream is responding to is "Osinermin." This \$620 million RFP divides Peru up into three regions, North, Central, and South. Companies are asked to respond to the RFP in the territories where they are interested in participating. WTI LatAm became an officially registered participant in the bid process and will be applying for contracts in the North and South, excluding the Central region as it contains predominantly jungle areas free of wind and solar irradiance. The RFP applications are due in Q2 of 2014, and the contracts will be awarded sometime in Q3 of 2014. WindStream has partnered with prominent Peruvian businessmen and legal teams in the country with hopes of winning a material portion of the project as a provider of a hybrid solution bidding on the project.

In addition, WTI anticipates entering into a Memorandum of Understanding with the finance arm of the Peruvian Government, COFIDE<sup>17</sup>, to help it promote its clean energy products to municipalities, local governments and entities looking to deploy low-cost renewable energy solutions. If successful, this strategic partnership will allow customers of WTI LatAM to finance the purchase of products using any number of the COFIDE financial vehicles available.

WTI has investigated other countries in Latin America that can avail themselves of the Company's products. Distribution agreements are being sought in Brazil, Argentina, Panama, Costa Rica, Columbia, and Bolivia. These potential new relationships for WindStream will take time to be

fully vetted before any sales channels can be opened up and any revenue generation can begin.

#### **United States Military**

In 2014, the United States military will continue its efforts to drastically improve its environmental impact in regards to water, waste and most notably energy. The Army is pursuing a goal of a "Net Zero" carbon emission policy by 2020 through a program that was initiated in 2011.<sup>18</sup>

In Q2 of 2014, the SolarMill will become part of the landscape at the U.S. National Guard facility in Sea Girt, New Jersey. Once construction of new roofs are completed on buildings damaged during hurricane Sandy, pilot SolarMills will be delivered, installed, and monitored with the goal of a wider deployment throughout the campus later in the year. Conversations are ongoing with other National Guard bases interested in utilizing our technology as well.

WindStream Technologies has made further inroads in positioning the SolarMill products and is working to provide its technology to bases across the country to assist in the Department of Defense's efforts to achieve the Net Zero mandate. Meetings are being set up now at key Army bases on both coasts that are motivated and have significant budgets for renewable energy solutions.

#### **Manufacturing**

The worldwide nature of WindStream's opportunities creates complexity and challenges. The SolarMill products are currently manufactured in North Vernon, Indiana in a 50,000 square foot facility and are shipped to customers all over the globe. The added costs of shipping, import taxes and tariffs, time on the water, and the variable nature of foreign currency all contribute to the difficulty of selling the products globally. In order to avoid some of these problems, WindStream plans to establish assembly/manufacturing facilities in territories where the Company feels significant sales volume are possible. We believe the benefits of local manufacturing outweigh the challenges and logistical concerns.

We are currently planning to establish our first facility in Hyderabad, India, with WTI's partner, HBL Power Systems.<sup>19</sup> HBL will potentially be WTI's contract manufacturer for all products sold in India and the Company is anticipating its first SolarMills to come off the line in Q2 of 2014. If this is achieved, we believe the products built in India will benefit from the reduced cost of logistics, labor, and the dollar-to-rupee conversion as well as being eligible for the government incentives that are currently being offered.

Riyadh Renewables plans to develop an assembly and manufacturing facility to service the GCC market. This facility will begin as an assembly plant, with components delivered out of the North Vernon factory. As volumes increase throughout the GCC, we believe that more manufacturing responsibility will be given to the Saudi Arabia facility.

WTI intends to establish a manufacturing facility in order to service Latin America. Countries and or locations are under consideration.

We anticipate that the terms and business points of all of these facilities are similar for each territory: WindStream has or will establish a Joint Venture with a local parent and offer its IP and know-how for the Company's stake in the JV to be controlled by WTI. This arrangement allows the Company to book the revenue from sales and maintain the quality of the products being produced.

#### **Future Products**

Communications towers in emerging markets suffer from a similar problem: many rely on energy that is inconsistent, unreliable, expensive, and in many cases, diesel-power generated. According to *Scientific American*, there are about 5,000,000 cell phone towers worldwide, 640,000 of which are not connected to an electrical grid and largely run on diesel power. WindStream is developing what we believe is a unique technology, a derivative of its SolarMill products, which harnesses the power of the available renewable resources and uses that energy to power these communication towers.

By taking the efficient and affordable design of the SolarMill technology and installing the turbine component of the product along the side of the communications tower, the electronic components can then be powered from clean renewable energy. This new product line, the "TowerMill," is slated to be deployed in trials in off-grid settings in the Middle East and India in Q2 / Q3 of 2014. We believe that these early-phase trials will prove the efficiency of the product and the ultimate cost savings to the owner and/or operator of the tower and its supporting electronics.

As more and more cellular technology is deployed in rural parts of the world, there will be an increased need to construct and install these types of communication towers. In India alone, there are greater than 350,000 such towers that are completely off-grid and require regular fuel runs and scheduled maintenance to keep the diesel generators operational and the towers with a 100% up-time.

The government of India has recently mandated that 50% of towers in rural areas be supplied by renewable hybrid generation sources.<sup>20</sup> The TowerMill, being a hybrid solution, will naturally fit this requirement and thereby create a potentially massive opportunity for the Company.

As a newly listed public company, 2014 expects to be an exciting year for WindStream Technologies (WSTI) and its shareholders. The Company has identified its distribution partners and channel opportunities and has a clearly defined path for growth and new product development.

We look forward to making 2014 a success for all!

Sincerely,  
Dan Bates  
President & CEO  
WindStream Technologies, Inc.

#### **Forward-Looking Statements**

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995: Certain statements in this press release constitute forward-looking statements for purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs but they involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements, such as business and political conditions in the geographic areas in which we sell our products; weather and natural disasters; changing interpretations of generally accepted accounting principles; outcomes of government reviews; inquiries and investigations and related litigation; continued compliance with government regulations; legislation or regulatory environments, requirements or changes adversely affecting the businesses in which we are engaged.

The information set forth herein should be read in light of such risks. You are urged to consider these factors carefully in evaluating the forward-looking statements herein and are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by this cautionary statement. The forward-looking statements made herein speak only as of the date of this press release and the Company undertakes no duty to update any forward-looking statement to conform the statement to actual results or changes in the Company's expectations.

<sup>1</sup> <http://www.modernghana.com/news/164812/1/17bn-people-live-in-darkness.html>

<sup>2</sup> <http://phys.org/news/2013-11-rural-india-electricity.html>

<sup>3</sup> <http://mnre.gov.in/information/renewable-energy-regulatory-framework>

<sup>4</sup> <http://www.bbnl.nic.in/content/>

<sup>5</sup> [http://articles.economicstimes.indiatimes.com/2013-07-31/news/40915892\\_1\\_gigabit-passive-optical-network-foreign-vendors-gpon](http://articles.economicstimes.indiatimes.com/2013-07-31/news/40915892_1_gigabit-passive-optical-network-foreign-vendors-gpon)

<sup>6</sup> <http://www.mnre.gov.in/>

<sup>7</sup> <http://www.cwet.tn.nic.in/>

<sup>8</sup> <http://www.windpowermonthly.com/article/1173394/analysis---financing-saudi-arabias-wind-energy-plan>

<sup>9</sup> [http://www.deloitte.com/assets/Dcom-MiddleEast/Local%20Assets/Documents/Industries/Energy%20&%20resources/E&R%20whitepapers/me\\_er\\_whitepaper4\\_energy\\_efficiency.pdf](http://www.deloitte.com/assets/Dcom-MiddleEast/Local%20Assets/Documents/Industries/Energy%20&%20resources/E&R%20whitepapers/me_er_whitepaper4_energy_efficiency.pdf)

<sup>10</sup> <http://cleantechnica.com/2013/09/26/280-mw-solar-thermal-power-plant-built-kuwait-contract-signed-3-27-billion-dollar-project-al-abdaliya/#GUsJDt4zShDD6J6P.99>

<sup>11</sup> <http://www.eia.gov/countries/country-data.cfm?fips=sa>

<sup>12</sup> <http://www.masdar.ae/en/masdar/detail/united-arab-emirates-leading-the-renewable-energy-charge>

<sup>13</sup> <http://dohanews.co/qatar-to-boost-renewable-energy-with-reservoir-rooftop-solar-panels/>

<sup>14</sup> [http://www.oxfordbusinessgroup.com/economic\\_updates/bahrain%E2%80%99s-renewable-energy-plans](http://www.oxfordbusinessgroup.com/economic_updates/bahrain%E2%80%99s-renewable-energy-plans)

<sup>15</sup> <http://www.eia.gov/countries/cab.cfm?fips=MU>

<sup>16</sup> <http://www.usaid.gov/powerafrica>

<sup>17</sup> <http://www.cofide.com.pe/>

<sup>18</sup> <http://www.defense.gov/releases/release.aspx?releaseid=14420>

<sup>19</sup> <http://www.hbl.in/>

<sup>20</sup> <https://sv.tie.org/event/tie-sig-energy-powering-india%E2%80%99s-poor-mobile-phones-mini-grids-and-community-power>

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