



# DEEP DIVE: JONESBORO GREEN TECH BOND

*Heron Investment Retrospective*

*City of Jonesboro, Arkansas*

*Taxable Economic Development Revenue Bonds, 2010 Series A*

*By Barbara VanScoy*



*In 1996, Heron first made the commitment to begin using our investment portfolio (and not only our grant dollars) to serve our mission. Some of our earliest impact investments were in our fixed income portfolio, in partnership with Community Capital Management (CCM), where Barbara VanScoy was our portfolio manager. She partnered closely with Heron to find fixed income investments that met our financial needs while also seeking out a positive social impact.*

*The impact investing market has come a long way since then, and it's important to learn from where we've been. We asked Barbara, now principal at Alpha Impact Advisors, to do a series of retrospective deep dives into a broad selection of those early fixed income investments and help us learn from those experiences. Her work provides an opportunity to explore ways to seek better impact through our future fixed income investments.*

*In part, this process has been an opportunity to view these past investments through a "net contribution" lens, which invites us to explore impacts across all involved stakeholders. This lens was in its early stages of development at the time these deep dives were written, and Barbara's work helps us to elucidate several areas of further exploration.*

*We invite you to learn with us.*

## EXECUTIVE SUMMARY

<b>Issue Date:</b>	October 27, 2010	<b>Maturity Date:</b>	October 1, 2018
<b>Bond Coupon:</b>	3.375%	<b>Rating:</b>	A (S&P)
<b>CUSIP:</b>	480258AH5	<b>Heron investment:</b>	\$200,000

Heron invested in a municipal bond intended to build a wind turbine factory for the Nordex Group. In partnership with the local college/university, Nordex planned to train and employ several hundred local workers in advanced manufacturing techniques for this up-and-coming green technology. The factory launched but ran only for a short time before it failed. It was replaced by a rail manufacturer attracted by the infrastructure improvements that had been created for Nordex, resulting in a net job increase.

The bond was fully repaid by Nordex, but the local labor force paid the externalized costs in the form of turmoil in the local job market. The local college opted to continue the mechatronics training program even after Nordex's departure, but there aren't immediate local jobs for those skills.

### Overall Performance

Heron's [net contribution](#) lens organizes an enterprise's performance into four areas: human capital (including effects on employees), natural capital (including environmental inputs and outputs), civic capital (including impacts related to taxation, regulation, and local communities), and financial capital (including financial performance).

In three of these areas there was a net positive effect: Financially, the bonds were repaid in full and with interest. Civic capital saw infrastructure and educational improvements. Regarding natural capital, a "green" product was made and an old factory revitalized in an environmentally friendly way. However, the human capital effects are negative overall, with a lot of short-lived jobs creating turmoil in the job market, and ultimately no job market for those receiving the new training.

## ASSET OWNER CONTEXT FROM HERON

Heron's mission has long been to help people and communities help themselves out of poverty. At the time of this investment, our strategy was based on asset-building in low-income communities. Therefore, we had CCM look for community development investments (including homeownership and down payment assistance, small business loans, enterprise development activities, and comprehensive community development projects).

In that context, Jonesboro's profile of having lower income and higher unemployment than the national averages, along with a growing population and an educated population, made it a good fit for a community that was poised to help itself out of poverty by investing in a new, high-tech industry anticipating growth due to the long-term shift toward sustainable energy sources.

As we look through older vintage investments such as the Jonesboro bond through the much more recently-developed lens of net contribution, we find ourselves with a number of questions, including the following:

**Priorities and weighting:** It's clear that there were a variety of impacts, both positive and negative. How do we think about evaluating those impacts and weighting them appropriately against one another? For example, is the fact that Nordex provided four years' worth of good jobs of greater positive value than the negative impact of those jobs eventually being lost — along with the turmoil elsewhere in the supply chain (as in the opening and then closing of the Beckmann Volmer supplier plant in nearby Osceola)?

**Time scale and final outcomes:** How do we think about Trinity Rail, the ultimate buyer of the facility, provider of jobs, and beneficiary of infrastructure investment — and which has disappointing social performance scores [according to CSR Hub](#)? Do we include evaluation of Trinity Rail, even though they were unrelated to the original bond or the intentions for it?

**Scope of evaluation and zone of control:** The net contribution approach was developed with evaluating single enterprises in mind. Government bonds, however, commonly have one entity (or group) issuing the bond, and another carrying out the relevant project. Which enterprise or enterprises are the most appropriate to evaluate?

**Tax credits and other governmental incentives:** Tax credits on both local and national levels played a powerful role in both Nordex's coming to Jonesboro and its departure. How do we consider the nuances and application of tax credits and incentives, and include their impact in evaluating the outcomes and net effects of our investments?

## BOND DETAILS

In October of 2010, the Heron Foundation invested in a bond issue that fostered the site preparation and construction of a wind turbine assembly plant in Jonesboro, Arkansas. The City of Jonesboro issued the bonds to finance the purchase of 187 acres of land, and to build and equip a wind turbine manufacturing facility to be leased by [Nordex USA](#), a leading global manufacturer of wind turbines. To finance the costs of acquiring land, the City of Jonesboro issued [special obligation bonds](#), which they intended to pay back using [income from Nordex's lease payments](#) [PDF] on the facility.

The bonds were issued in two series, the 2010 Series A bonds (\$11,000,000 taxable issue) and 2010 Series B bonds (\$9,000,000 tax-exempt issue). (As private foundations are already tax-exempt, Heron could not benefit from the tax exemption of the Series B bonds. Tax-exempt bonds tend to have lower returns than their taxable counterparts, so Heron invested only in the Series A taxable bonds.) The \$11 million principal and interest on the 2010 Series A taxable bonds (only) were guaranteed by [Arkansas Development Finance Authority](#) (ADFA), who guaranteed \$6 million, and the [Arkansas Economic Development Commission](#) (AEDC) who guaranteed \$5 million. This ensured that both principal and interest would be repaid even if the lease payments approach failed, which made them a very secure investment while still providing returns that were in line with comparable market-rate securities.

On June 5, 2014, the Jonesboro 2010 Series A Bonds were [defeased](#) and were fully redeemed on October 1, 2015. The 2010 Series B Tax-Exempt Recovery Zone Facility Revenue Bonds were also redeemed in full on October 1, 2015. The Bonds were redeemed prior to maturity due to the closing of the Nordex wind turbine plant.



# THE BOND STORY

## Intentions & Expectations

At the time of this investment, Heron's bond mandate included a heavy emphasis on enterprise development, with the intention of creating jobs that would be accessible to low-income people and help provide a pathway out of poverty. The Nordex plant at Jonesboro fit the bill by providing manufacturing jobs along with advanced training. As a bonus, these jobs were in a renewable energy technology—a growing field, in which this training would prove valuable to workers, and one producing energy with less environmental harm than existing providers using non-renewable resources.

The Nordex USA is an original equipment manufacturer (OEM) that intended to use the Jonesboro facility to focus on its large-scale turbine family. In the United States, each of these utility-scale turbines is capable of generating enough renewable energy to power about 700 homes.

Nordex planned to directly employ approximately 700 skilled workers and other staff by 2014 at an average wage of \$17 per hour. Because turbine manufacturing and assembly require specialized skills, Nordex planned to train their workforce through a 10,000 square foot on-site training academy, [developing a partnership](#) with [Arkansas State University](#) to teach “mechatronic” skills, which combine mechanical and electrical engineering know-how specific to wind turbine manufacturing. The plant was also committed to making its supply chain 80 percent domestic within a year of opening.

Both the City of Jonesboro and the State of Arkansas offered Nordex incentives to locate and build the manufacturing facility within a local technology park. Arkansas Economic Development Commission offered \$8 million in economic incentives from the Governor's Quick Action Closing Fund to attract Nordex to the State, including \$6 million allocated to Nordex for training and site preparation. The State cited renewable energy for targeted business recruitment under a 2009 strategic plan for economic development. By 2010, Arkansas already was entrenched in the wind industry, employing up to 2,000 direct and indirect jobs, and the State of Arkansas and the region were excited about positioning themselves

## TIMELINE

*2008 [October]* City & state officials offer incentives that help persuade Nordex USA to locate their first United States-based wind turbine plant in Jonesboro, Arkansas.

*2009 [July]* Nordex begins construction of the plant.

*[September]* Nordex has 54 employees, ~80% locals, including the first production crew.

*2010 [October]* City of Jonesboro issues \$11mm Taxable Economic Development Revenue Bonds 2010 Series A & \$9mm Tax-Exempt Recovery Zone Facility Revenue Bond

*[October]* Nordex USA celebrates factory opening & begins producing nacelles.

*2011-12* Nordex supplies and services wind turbines for projects around the United States.

*2013 [June]* Nordex USA announces that it is closing its turbine factory after fulfilling existing orders because of excess competition and cuts in government tax benefits.

*[Fall]* ~40 employees in Jonesboro and at offices in Chicago are laid off.

*2014 [June]* The City of Jonesboro terminates lease and transfers ownership to Nordex.

TrinityRail purchases the factory to manufacture railcars.

*2015 [October]* The Jonesboro bonds are fully repaid.

well in the renewable energy manufacturing industry. In addition, under the American Recovery and Reinvestment Act (the stimulus), Nordex received a tax credit of \$22.2 million.

In part to supply the Nordex plant with steel parts, Germany-based [Beckmann Volmer North America LP](#) opened a \$12 million factory in nearby Osceola with the goal of hiring approximately 300 people at an average wage of \$18 per hour. Beckmann Volmer had preliminary plans to invest an additional \$7.5 million in the plant that could create another 200 jobs. The State of Arkansas offered Beckmann Volmer about \$4 million in incentives, including New Markets Tax Credits.

## Execution

Construction of the facility included the nacelle assembly plant and a rotor blade manufacturing facility. Nacelles house the engine and other key turbine components and sit high atop a wind turbine tower. The nacelle plant had 115,000 square feet of production space, 10,000 square feet for a training academy and 35,000 square feet of office space. The Nordex plant used geothermal energy for heating and cooling.

As of September 2009, Nordex had hired 54 employees, about 80 percent locals. This included the first production crew and they began production. Job functions ranged from production assembly, process engineering, supply chain management, facilities management, training, quality assurance, safety, administration, and management. Nordex planned to grow its ranks to nearly 70 in Jonesboro and 175 nationally by the end of 2010,<sup>1</sup> with the potential to create a total of 700 jobs in Jonesboro and 1,000 nationally over the next four years, not including indirect jobs created by suppliers and service providers. As a result of this project, Jonesboro and the surrounding region anticipated numerous parts and components suppliers to Nordex to locate in the area.

## Outputs & Outcomes

In June of 2013, [Nordex announced](#) that it would stop production at the Jonesboro plant once existing orders had been fulfilled, citing “the wind industry’s global overcapacity and ... weakened demand from the US market, brought on by the unpredictable extensions of the Production Tax Credit (PTC).” Their plans at the time included supplying future nacelle orders out of their German production facility, while maintaining U.S.-based service and repair. The training academy, the central parts storage, and the repair facility in Jonesboro initially remained in operation to support service and operations in the Americas, but ultimately closed with the sale of the plant. Nordex had employed as many as 186 people when it was running the facility.

In June 2014, the City of Jonesboro agreed to terminate their lease agreement with Nordex and transfer ownership of the facility to Nordex (for a nominal price of \$10), and Nordex agreed to retire the outstanding bond issue. (It appears that, because of how the deal was structured, Nordex had to take over the facility in order for the lease to be terminated.)

After the Nordex plant closed and the lease was terminated, the bonds were redeemed in full at [par](#) (the amount of principal of a security that must be paid at maturity). There was no principal loss to investors, only a premature, unexpected call. Bonds were never downgraded nor put on credit watch.

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<sup>1</sup> Jobs planned nationally included those at the headquarters of Jonesboro USA in Chicago, IL, and presumably some installation, repair and maintenance on existing and planned installations in Minnesota, Pennsylvania, Wisconsin, Maryland and Colorado, as noted in the [October 2010 press release](#) announcing the Jonesboro factory.

Nordex repaid almost \$2.5 million from incentives it received for locating its manufacturing facility in Jonesboro, including \$2.31 million from the State of Arkansas and \$204,814 from the City of Jonesboro. Also, Nordex returned \$263,000 in tax rebates for failing to create jobs.

Even with the incentives received, Nordex had spent millions upgrading the plant and making lease payments (according to their [October 2010 press release](#), the plant represented a \$40 million investment by Nordex). Nordex repaid both of the bonds in full, and the guarantees by ADFa and AEDC did not have to be invoked. And Nordex paid back a variety of incentives, even though there were no clawback provisions requiring that they do so. It appears that, by allowing Nordex to take over ownership of the facility and re-sell it to the next buyer, the City of Jonesboro was able to hand over the responsibility for attracting a new employer to the region, and allow Nordex to recoup some of their losses. This presumably played a role in Nordex's decision to repay incentives.

Nordex sold the closed plant to [Trinity Industries](#), a Dallas-based firm, to be [re-opened as a railcar manufacturer](#). The company's subsidiary, TrinityRail Maintenance Services Inc., provides railcar maintenance and services. The Arkansas Economic Development Commission provided \$2 million to TrinityRail [to locate in the former wind turbine plant](#). Trinity planned to spend \$35 million to outfit and expand the facility. TrinityRail said the jobs will pay about \$18 per hour and that it initially planned to hire between 75 and 100 people, with estimates of hiring up to 350 workers.

The plant Nordex had upgraded and the improved roads & infrastructure helped attract another employer, as both Nordex and TrinityRail needed roads that could handle the size and weight of major manufacturing equipment and their very large products.

In response to the loss of Nordex, Beckmann Volmer, a direct supplier to Nordex, [closed their manufacturing plant](#) in 2014 and went bankrupt. In early 2015, the [Osceola City Council](#) agreed to sell the Beckmann Volmer plant to the German steel company, [SMS](#). SMS planned to hire approximately 50 employees, primarily blue collar positions such as mechanics, welders, assembly line workers, and engineers.



# ANALYSIS

## Rationale at the Time of Investment

### Financial

Heron had asked for a fixed income portfolio similar to the Barclays Aggregate Bond Index with respect to credit quality, duration, and financial performance.

The financial decision to invest in the Jonesboro-Nordex issue was based on the strong fundamental credit profile, the A rating, and the [duration](#) of the bond. While Jonesboro issued the bond, the Arkansas Development Finance Authority (ADFA) and the Arkansas Economic Development Commission (AEDC) acted as guarantors, ensuring principal and interest repayment, which provided an additional level of security. As the bonds were rated A, Heron's portfolio added additional yield relative to AAA securities. The bond had an eight-year maturity and duration was in line with comparable market-rate securities.

Additionally, the benchmark typically has 25-35 percent in corporate bonds. As a credit and yield substitute, we used taxable municipal bonds to get community development impact. Since the Jonesboro bond was a taxable municipal security, it helped Heron maintain an appropriate allocation to this sector of their bond portfolio.

### Social

From a social perspective, this bond was an easy decision for the portfolio. It fulfilled several of Heron's mission-aligned goals, including enterprise development, job training, job creation, and environmental sustainability.

### Opportunity Cost—If not this bond, what other options were available?

To match duration, only two sectors were available at the time: taxable municipal bonds and Small Business Administration Participation certificates (SBAPs). SBAPs provided a lower yield and an indefinite use of community development proceeds, which made them less attractive from both a financial and a mission standpoint. Other taxable municipal issue opportunities included single-family housing and downtown urban revitalization, both of which were already represented in the portfolio.

High credit quality taxable municipal bonds that finance enterprise development, especially in economically impoverished regions, however, are scarce. The Jonesboro issue offered Heron a unique opportunity to foster economic development through renewable technology. Ultimately, the credit profile, the duration, and the community development story associated with the bond were superior relative to other options for the portfolio.

## Did the Bond Produce a Net Contribution to Society?

### Human Capital – Net Loss

- **Job creation & volatility:** The arrival and departure of Nordex and arrival of TrinityRail did add jobs to the region on net. However, it was not as many jobs as hoped, and there was a lot of employment instability caused by the creation, loss and re-creation of jobs.
- **Training supply without job demand:** Although the local university will continue to offer training in mechatronics, there is no longer a partnership with Nordex or other local providers to

offer jobs to those receiving that training. Those skilled workers may need to go elsewhere to get jobs that make use of their skills.

- **Collateral job creation & volatility:** The creation and then loss of supply chain jobs at Beckmann Volmer also represents additional turmoil in the job market for local workers. In addition, in their capacity overseeing construction of the facility, Nordex hired the construction firm, H&M Company, Inc. of Jackson, Tennessee, which dedicated between 250 and 300 workers for construction.

#### Natural Capital – Net Gain

- **Energy source:** The Nordex plant itself was constructed to use geothermal energy, a more environmentally friendly option.
- **Product:** During the time it was open, Nordex constructed wind turbines, thereby helping customers access more environmentally friendly energy.
- **Product/factory use:** The closed plant was bought by TrinityRail Maintenance. Given that rail transport is on average 3-10 times less CO<sub>2</sub> intensive than road or air transport, this also represents a more environmentally-friendly product line than competing product types. In addition, if the shuttered factory could be considered a “waste product” of the Nordex experiment, making use of the factory itself is a form of recycling or closing the loop.

#### Civic Capital – Net Gain

- **Return of funds:** Nordex repaid both the bond funding and some of the other state and local incentives that were used to attract them to Jonesboro. The exact figures of what Nordex contributed to or extracted from the local economy (including e.g. wages paid to and income taxes paid by their workers) would likely be impossible to calculate exactly, but on the whole it appears that Nordex did not prove to be a tax burden on state and local residents—and in fact, given that their incentive repayments were voluntary, it seems they made good-faith efforts to be a good corporate citizen.
- **Infrastructure improvements:** The bond resulted in creating built infrastructure that was capable of accommodating the size and weight of large turbines, which attracted a replacement employer.
- **Educational opportunity:** Local university responded by adding curricula focused on advanced manufacturing, which they will continue to offer for the benefit of future students.

#### Financial Capital – Net Gain

- **Financial performance:** Bond holders were repaid in full and received the accumulated interest for their investment up to the date of redemption. While bond holders missed out on the coupon payments that would have occurred from that point to maturity, they did have the opportunity to make new investments and recoup that time value.

#### Overall: NET CONTRIBUTOR

While the project did not generate the anticipated results, the region did gain more jobs overall. The State and the City invested in the region to improve infrastructure and training to become more attractive to employers seeking to locate in the area.

## PORTFOLIO MANAGER'S RETROSPECTIVE

**Would I choose this bond for Heron's portfolio, knowing what I know now? Yes.**

I expected the bonds would create high-skilled, well-paying jobs in renewable energy in an impoverished region of the country, with ancillary increases in supply chain employment and educational outputs. The project failed to deliver those anticipated results, but I don't believe the endeavor was a failure. Overall, I believe the positives noted in the net contribution analysis outweigh the negatives—and also outweigh the potential positive contribution of the other investment options that were available at the time.

## GLOSSARY

*Adapted from definitions by [Investopedia](#) and the [Municipal Securities Rulemaking Board \(MSRB\)](#).*

**Defeasance** is a provision that voids a bond or loan when the borrower sets aside cash or bonds sufficient enough to service the borrower's debt. This functions as a way to terminate the rights of bondholders of their lien on pledged revenues while ensuring bonds are repaid in full.

**Duration** is a measurement of how long, in years, it takes for the price of a bond to be repaid by its internal cash flows. Bonds with higher durations carry more risk and have higher price volatility than bonds with lower durations.

**Par Value** is the 100% face value of a security and determines its maturity value as well as the dollar value of coupon payments. A bond that is trading above par is said to be trading at a premium, while a bond trading below par is regarded as trading at a discount. During periods when interest rates are low or have been trending lower, a larger proportion of bonds will trade above par or at a premium. When interest rates are high, a larger proportion of bonds will trade at a discount.

**Special obligation bonds** are secured by a limited revenue source or promise to pay, as opposed to a **general obligation bond** which is payable from general funds of the issuer. Most general obligation bonds are said to entail the full faith and credit (and in many cases the taxing power) of the issuer.