

Nexgen in Syracuse – Throwing Good Money after Bad?

Update: Note that the Syracuse Post Standard carried the following article on January 4th: http://www.syracuse.com/business-news/index.ssf/2018/01/ny_taxpayers_built_90m_factory_in_dewitt_for_firm_that_walked_away_didnt_create.html The article quotes ESD spokesman Jason Conwell. *“Conwall said the grant will be contingent on the company meeting its job commitments. Details of the grant’s terms will not be available until the grant disbursement agreement is executed later this month, but they will follow ESD’s standard practice of requiring companies to return a grant, or portions of it, if they fail to meet hiring milestones, he said.”*

Note that ESD General Project Plans, adopted by its Board, generally contain specific job and recapture requirements, and that the plan adopted by the Board in its December meeting does not. However, as Conwell states, such a requirement could be included in the Grant Development Agreement, which both ESD and the company would sign. If so, the action would address one of the issues in my commentary, below.

Recently, a news article in the Syracuse Post Standard, [“Soraa walks away from \\$90M factory that NY built; \\$15M more brings new tenant,”](#) described New York’s attempt to save its investment in a \$90 million facility in Dewitt, near Syracuse, originally intended for [Soraa](#), a manufacturer of LED lighting. In addition to the facility, Empire State Development has awarded a \$15 million grant to Nexgen, a power converter manufacturer. Both the original agreement with Soraa and the construction of the facility, as well as the new grant to Nexgen contain highly questionable features that expose taxpayers to real, unnecessary risks, features that are common to a number of projects undertaken by the SUNY

Polytechnic, SUNY Research Foundation and Fort Schuyler Management Corporation, a group of related state sponsored entities.

Soraa

In October, 2015, "[Governor Cuomo announced that Soraa, an industry leader in ultra-high performance lighting and LED technologies](#), will relocate its global manufacturing and research and development operations from California and overseas to SUNY Polytechnic's Central New York Hub for Emerging Nano Industries. This move will create 420 new high-tech jobs in Central New York and is being made possible thanks to a \$90 million state investment for the facility's construction."

The project, like [the Solar City project in Buffalo that I examined in an earlier post](#), made the SUNY Research Foundation the owner of the facility being constructed. Like Solar City, Soraa was to be responsible for a \$1 per year lease payment for the facility, and for shouldering operating expenses related to production. In my earlier post, I pointed to a major problem with the model used in these projects:

- "State taxpayers will be exposed to an unusually high degree of risk by the unprecedented structure of the SolarCity deal, under which Fort Schuyler Management Corp., a non-profit subsidiary of the State University's College of Nanoscale Science and Engineering, is building the factory for the company, and will retain ownership. SolarCity's up-front capital investment in the project is thus limited, weakening its incentive to remain in Buffalo after its dollar-a-year lease of the building expires in 10 years."

This issue was present in the deal with Soraa, along with an additional problem – one which left the state's investment exposed when Soraa pulled out of its deal with the SUNY

Research Foundation. SUNY's deal with Solar City calls for graduated penalties if the company ceases production at the facility within the first 10 years after completion of the project. The penalties would allow the state to recapture part of its investment of more than \$750 million in the project if the company broke the lease during that time. But, incredibly, SUNY's deal with Soraa contained no recapture provision, leaving the state with no return on its \$90 million investment in the building and equipment when Soraa decided not to go ahead with production in New York state.

Construction of the Soraa facility was delayed for a time because of the indictment by then U. S. Attorney for the Southern District of New York, Preet Bharara of Dr. Alain Kaloyeros, the head of SUNY Polytech, and of principals of Cor Development of Syracuse, on bribery, wire fraud, and other charges.

According to the Post Standard article, ["\[Howard\] Zemsky \[Chairman of Empire State Development\] said the delay may have been a factor in Soraa's decision to abandon the local plant. But he said Soraa also is facing competitive pressures from Asian manufacturers. The company ultimately decided not to invest in the DeWitt plant."](#)

Nexgen Power Systems

The public was made aware of Soraa's decision when Empire State Development's Board of Directors approved a \$15 million grant to a new occupant for the facility – Nexgen Power Systems. On December 20th, the Syracuse Post Standard reported that

["NexGen Power Systems, a startup company from California, plans to manufacture semiconductors for the electronics industry in the 82,000-square-foot plant in DeWitt, said Howard Zemsky, CEO of Empire State Development.](#)

NexGen has promised to invest \$40 million of its own in the

facility and to create at least 290 jobs within seven years, state officials said. The company plans to move in sometime around the middle of 2018...

Despite the assurances of state officials, the NexGen deal has the same primary problem as Sora and Solar City deals, and some others as well. Like the earlier deals, in the NexGen deal, New York State, through the SUNY Research Foundation retains ownership of the \$90 million facility, leasing it to NexGen for \$1 per year. As a result, New York continues to bear the risk of ownership of the facility if NexGen does not continue to produce products at the Dewitt facility.

Although the Fort Schuyler Management Corporation website does not show an agreement with NexGen that describes its relationship with the company, Empire State Development's website shows the [General Project Plan](#) for the \$15 million grant that NexGen is receiving. While "Nexgen promises to employ 290 new full-time permanent employees within seven years of project completion," the General Project Plan does not include a requirement setting the length of time the company must maintain the jobs or a provision for recapture of a portion of the value of the facility if the company leaves. As a result, the employment commitment in the ESD grant appears to be unenforceable. Also, though the Syracuse Post Standard quoted state officials as saying that "*NexGen has promised to invest \$40 million of its own in the facility,,,*" The ESD Board materials contain no reference to any financial commitment by the company.

This raises another concern that is common to the projects undertaken by the SUNY Research Foundation. Solar City, Sora and Nexgen have relatively little company capital investment in their New York projects. Because the state is providing essentially all of the capital costs of these projects, New York is getting very little leverage from the investment of State dollars. This is in sharp contrast to prior state assistance to businesses – even for large projects like the

semiconductor facility operated by Global Foundries in Malta – where ESD provided grants covering \$650 million of the \$3.2 billion capital investment (The company was also eligible for up to \$600 million of Empire Zone benefits over 10 years).

Nexgen Power Systems – Company Risks

Nexgen is a startup company, and, there is little publicly available information concerning the production or distribution of established products. In fact, [the company's website provides no specific information about the company's financial resources or production capabilities](#). Nor does publicly available information show that the company has received venture capital funding to support the \$40 million that state officials say that it has promised to invest in operating costs related to production at the facility.

Press reports indicate that the company is a successor to [Avogy, a failed startup](#), that produced laptop chargers that claimed to use the same gallium nitride technology that Nexgen promises to use in its Dewitt facility. One analysis ([“Is Avogy Inc. Dead?”](#) on PntPower.com) of Avogy's failure pointed out, “Avogy developed a GaN/GaN power semiconductor device. They own several patents in the field...But, according to all the people we discussed with, the distribution of these devices has never been large.”

According to Crunchbase.com, Avogy had received \$40 million in a second round of venture capital funding in 2014 from Intel and Khosla Ventures, before disappearing in early 2017. [Court documents](#) indicate that total venture funding for the company was \$60,000,000.

Nexgen acquired Avogy's intellectual property for \$200,000. A report on Axios.com states that Khosla Ventures, the venture capital firm that had invested in Avogy, had sued Dinesh Ramanathan, the founder of Avogy and Nexgen. The report states, [“Vinod Khosla's venture capital firm has sued the](#)

former CEO of a failed portfolio company, accusing him of fraud and extortion. But it's not really about recovering the \$60 million that Khosla Ventures invested, since that money is long gone. Instead, it's about getting back at what Khosla believes is a duplicitous executive by exposing his alleged misdeeds." The suit argues that Ramanathan engaged in self dealing by rejecting a slightly better offer for the intellectual property than his own bid, and attempted to illegally gain a cash payment from Soraa for the technology.

Nexgen's website indicates that its core product is a laptop charger that is smaller and lighter than current devices. The company claims to have switching technology that operates at higher frequencies than current silicon-based technology, reducing the size of inductors and capacitors in the circuit. The website describes the technology this way: "Avogy's TrueGaN /XX platform...uses high frequency GaN switches in combination with a high efficiency circuit architecture, to enable at a fundamental level, the change required to build small power supplies, safely." In the past, gallium nitride based devices have been relatively expensive.

The charger is shown on a page on the Nexgen website that is not linked to the company's home page. Originally advertised at \$99.95, the device is now available at \$29.95 on Rakuten.com. The charger is also sold on Amazon.com, where it has only three reviews, two of them negative, with comments about sparks and fire hazards. Amazon.com indicates that the charger's sales rank is 1,070 in the charger category. It faces competition from FIXSix, which produces a similar small, laptop charger (FIXSix Dart).

While it was in business, Avogy produced a laptop charger through a subsidiary, Zolt, that claimed to use gallium nitride technology . However, a teardown published on chipworks.com claimed that the charger used silicon technology, not Gallium Nitride.

The future prospects of Nexgen are unknown. The company may continue to compete in the marketplace with a laptop charger that faces stiff competition from existing products. It might also manufacture and sell power conversion semiconductors using its technology to product producers. Whether it can succeed will depend on a number of factors, including the advantages its technology offers, the price of its products, and its success in developing relationships with product producers and sellers.

Startup Companies and Venture Capital

When New York offered funding for the Global Foundries semiconductor chip fab it was dealing with an established company in an industry, because of the very large capital requirements and production expertise required, that has high barriers to entry. But, barriers to entry are relatively low in other technology industries, like power conversion. Additionally, investing in startup companies carries considerable risk, because the companies fail at relatively high rates. As a result, when New York acts as a venture capitalist, its investments carry high risks.

Startup companies often receive funding from venture capitalists, as Nexgen's predecessor, Avogy, did. Other sources include angel investors, and business incubators. In these cases, investors get ownership stakes in the companies. These investors generally participate in operational decisions of the companies that receive funding. Financial, industry knowledge, marketing and networking expertise are generally provided.

New York, through the SUNY Research Foundation, does not provide the same kinds of assistance to the companies that it assists. For example, the Memorandum of Agreement with Sora made the Foundation responsible for constructing and equipping the facility for up to \$90 million. It also promised to help the company locate additional high technology jobs at the

company's contractors and suppliers in New York State, and to provide training for company staff.

Since New York State does not have an ownership interest in companies like Nexgen and Soraa, it has no real leverage to ensure that assisted companies will employ good financial practices, and is not offering to provide assistance in operational matters, such as developing relationships with product buyers and in product marketing.

As a venture capitalist, New York is in a relatively weak position, because it does not take ownership positions that would provide it some control over assisted companies, and has chosen to make large investments without finding partners to share risk. By making large investments in a relatively small number of firms, the State's approach increases the risk to its investments associated with company failures.

Conclusions

Soraa's decision not to locate at the facility that New York had built for it in Dewitt left the state in a difficult position. Because the state owns the building and equipment within it, it needed to find a tenant, to ensure that some return would be received on its investment. Since the building had specialized design features and equipment intended for a company using gallium nitride technology, Nexgen appeared to offer a reasonably good solution to New York's problem. But, based on evidence now available, the state appears to be repeating mistakes that put it in the position of needing to find a tenant for a nearly \$100 million facility. Most importantly, while the Nexgen promised to employ at least 290 people at the facility, the General Project Plan adopted by Empire State Development does not specify the time period for which employees must be retained and provides no penalties if the company does not meet its employment target.

At the same time, the State's \$105 million investment provides a very poor return on investment, based on the most optimistic assumptions. The economic benefit of the project (tax revenues to state and local government plus net resident disposable income) according to Empire State Development's Benefit-Cost evaluation is only 1.47 to 1, far below ESD's benchmark for projects of 75 to 1. The project's fiscal (tax revenues to state and local governments) benefit cost ratio is negative: .12 to 1.

But, ESD's benefit-cost analysis is not credible, because it assumes the project will maintain 290 new jobs over seven years. Since the project plan does not contain any requirement for the period of time that jobs must be maintained, and since there is no recapture agreement in the event that jobs aren't created, the analysis is based on an assumed set of circumstances that the agreement does not require the company to meet.

Finally, note that the decision to chase 290 high technology jobs in this case carries a high price tag – \$105 million, an amount that is substantially larger than the amount (\$86 million) that the region will receive in the coming year from the state's primary regional economic development initiative – the 2017 Regional Council Competition.

New York, like other states has emphasized the pursuit of high technology companies as a key to the state's future economic well-being. In New York's case, most of the state's spending has been on high technology manufacturing, including the Global Foundries Chip Fab in Saratoga County, Solar City's solar panel facility in Buffalo, Nexgen's power converter plant in the Syracuse area, Norsk Titanium in Plattsburgh, and Danfoss Silicon Power near Utica.

But the price tag has been very high; several billion dollars in total, and other than Global Foundries, none of the facilities is expected to employ more than 500 people. The

long term prognosis for these facilities is also doubtful. Over the past twenty years, employment in the electronics industry in the United States has cratered. Employment at computer manufacturers in 2015 was less than 20% of what it was in 1998. Electronic component manufacturers employ 42% of the workers that they did in that year. Semiconductor manufacturers employment is 45% of what it was in 1998. In New York State, despite the opening of the Global Foundries facility in Malta, semiconductor manufacturing statewide is 17% lower (Source: [U.S. Cluster Mapping Project](#), Institute for Strategy and Competitiveness, Harvard Business School).

Perhaps it is time for policy makers to gain a better understanding which industries are growing nationally and in New York State, and to focus their attention on making sure that New York gets its share of national growth. The state should also help existing businesses in New York compete by working with them to meet labor, facility and infrastructure needs.