



## INVESTING IN THE FUTURE WITH NUCLEAR ENERGY

A UniStar Issue Brief



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### CREATING GOOD AMERICAN JOBS

UniStar Nuclear Energy and its partners are making strategic investments in the future of nuclear energy—and those investments will translate into jobs for thousands of Americans. In June 2008, Alstom, a leading turbine-generator supplier for nuclear energy facilities, announced it was investing an additional \$200 million into its facility in Chattanooga, Tenn. This investment will also create 350 new jobs, including administrative, design engineering, and highly skilled, specialized manufacturing positions.<sup>1</sup>

AREVA announced plans to open new facilities in Idaho and Virginia and expand existing facilities in Virginia and North Carolina. In Virginia, AREVA and Northrop Grumman are building a \$363 million manufacturing facility in Newport News that will make major equipment for nuclear reactors in the U.S. and for export overseas. The plant will employ more than 540 people.<sup>2</sup>

AREVA's proposed Eagle Rock Enrichment Facility in Idaho is a \$2 billion, state-of-the-art facility that will supply enriched uranium to fuel America's fleet of nuclear reactors. The facility will employ hundreds and create additional jobs across the country through its own supply chain.<sup>3</sup>

In May 2009, AREVA announced a worldwide recruitment campaign to hire 12,000 employees—more than 600 in the U.S. alone.<sup>4</sup> Babcock & Wilcox will expand facilities in Mount

Vernon, Ind. and Lynchburg, Va. to supply major components, adding 300 skilled workers and 100 engineers.<sup>5</sup>

The building of nuclear energy facilities and production of energy pays dividends throughout the American economy. Supplier companies from more than 40 states participate in UniStar projects. The nuclear energy industry is helping rebuild America's middle class with good-paying, long-term jobs.

The peak construction phase of a new nuclear energy facility creates 4,000 jobs. In addition, each facility will employ 300 to 500 permanent staff during operations. These employees' salaries will be approximately 36 percent higher than the average salaries in the local area, based on experience with today's operating nuclear facilities.

### Job Creation: The Real Thing

As companies are investing hundreds of millions of dollars into building new facilities and expanding current facilities, more than 15,000 new jobs have been created in the process.<sup>6</sup> For example:

- UniStar has hired **230** workers as it ramps up for licensing, design and construction of new facilities.
- Alstom's expansion of a facility in Tennessee will include **350** new employees.
- Babcock & Wilcox will add **400** new workers when it expands facilities in Indiana and Virginia.
- AREVA and Northrop Grumman's new facility in Newport News will employ more than **540** people.

## PARTNERSHIPS FOR THE FUTURE

UniStar has partnered with some of the most respected companies in the industry to ensure that the best possible talent goes into building the next generation of nuclear energy facilities in the United States.

- **EDF Group**—One of the leaders in the energy market in Europe and an energy specialist active in every facet of electricity: production, transport, distribution, energy supply, and trading. EDF Group owns and operates France's 58 nuclear energy facilities.
- **AREVA**—Owner of the EPR™ design and the world's largest nuclear supplier, providing nuclear energy systems to more than 100 pressurized water reactors.
- **Bechtel**—The world's largest nuclear energy construction company, providing engineering and/or construction services to 85 of the current 104 U.S. operating nuclear energy facilities.
- **Alstom**—The world's No. 1 supplier of nuclear turbine-generator systems; has installed more than 178 units worldwide.
- **Accenture**—A global management consulting, technology services, and outsourcing company, has developed "Galaxy," an IT platform to support the lifelong knowledge management needs of a nuclear energy facility.
- **Excel Services Corporation**—engineering consultants with unique qualifications in Combined License (COL) application submittals, improved technical specifications (ITS), and inspections, tests, analyses and acceptance criteria (ITAAC).

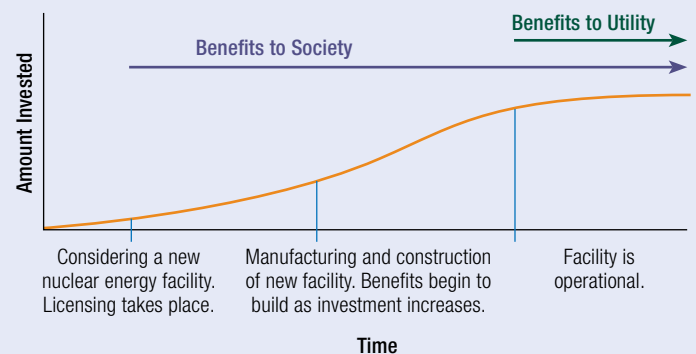
## INVESTMENTS IN NUCLEAR ENERGY ARE INVESTMENTS IN LOCAL COMMUNITIES

When UniStar proposes to build a new facility, the company is making a minimum 75-year commitment to that particular community. From the time the planning phase starts, through the facility's operational life and beyond, the nuclear energy company's investment in the community produces long-lasting benefits—benefits that start long before the facility begins operations.

It can take as long as 10 years for the facility to complete the licensing and construction phase. That's 10 years for the community to benefit from the construction expenditures and other new business. And once a facility is operational, the community will benefit further from cleaner, safer energy and high-paying jobs at the facility.

The average nuclear energy facility generates \$430 million per year in total output to the community, including \$40 million in labor income. It also generates \$20 million in total state and local tax revenue, which benefits schools, transportation projects, and other local infrastructure. Every dollar spent on a nuclear energy facility adds another \$1.07 to the local community in the form of taxes and money spent by workers who live in the community.<sup>7</sup>

### Investing Leads to Societal Benefits



*Investment in nuclear energy helps build careers and strengthen communities by bringing high-paying jobs, tax benefits and opportunities for local suppliers.*

## INVESTMENTS THAT LEAD TO ECONOMIC RECOVERY

Despite the current economic challenges and the prospect of an extended recovery, the nuclear energy industry is making significant investments, both here in the U.S. and abroad. Companies all over the world are planning and building new nuclear energy facilities with the knowledge that the world needs safe, reliable, clean-air energy today and in the future.

In 2008, more than two million Americans lost their jobs, and many American companies were struggling to pay their bills.<sup>8</sup> Nuclear energy investments are supporting the economy on the long road to recovery by providing new jobs, higher family income, and economic stimulus in the form of new manufacturing opportunities. Jobs in new nuclear energy are part of the recovery and part of the long-term solution.

Another part of the recovery is ensuring future generations of nuclear energy workers by preparing them for the high-paying jobs that will be created. The nuclear energy industry has invested millions of dollars into increasing the number of students who enter the nuclear field—an investment we are committed to continuing to make in the future.

## UNLEASHING THE POWER OF PRIVATE INVESTMENT

This investment is just the beginning for the nuclear energy industry. With government support in the form of loan guarantees and tax incentives, jobs and private capital will continue to flow.

By the end of 2008, new nuclear energy projects had created more than 15,000 jobs.<sup>9</sup> UniStar Nuclear Energy, for example, had spent \$375 million on projects by the end of 2008, and the nuclear energy industry overall had invested \$4 billion. If government policies firmly supported and encouraged construction of new nuclear energy facilities, this number can grow to more than \$100 billion.<sup>10</sup>

The American nuclear energy industry has invested billions of dollars into the energy renaissance and the American economy. The industry has created long-term, high-paying jobs that will



*Nuclear energy companies are investing millions of dollars to attract students to the nuclear field in the hope of securing the next generation of workers.*

benefit thousands of families across the nation. Continued private investment will ensure that more jobs and economic investment are still to come. Investment in nuclear energy is a welcome boost toward economic health in the U.S.

## ATTRACT STUDENTS NOW TO SECURE WORKFORCE

In 2006, the Center for Energy Workforce Development launched a campaign aimed at addressing workforce shortage issues that could arise from an increase in nuclear energy demand.<sup>11</sup>

Industry groups such as Nuclear Energy Institute, Institute of Nuclear Power Operations, National Academy of Nuclear Training, and nuclear energy companies across America are gaining students' attention by developing programs and scholarships to generate interest in the nuclear energy field.

**To meet our nation's climate change goals, the U.S. must build 100 new nuclear energy facilities in the next twenty years. This investment in America's future would create more than 150,000 new, long-term, construction jobs and nearly seven times as many manufacturing, supply chain, retail, and service jobs in the wider economy.<sup>12</sup> The new facilities would add nearly 44,000 permanent jobs and generate \$43 billion in income in their respective local communities. These new facilities would also pay \$2 billion per year in state and local taxes and \$7.5 billion per year in federal taxes. Between 1970 and 1990, the U.S. built 95 reactors; we can do it again.<sup>13</sup>**

“There’s no reason why, technologically, we can’t employ nuclear energy in a safe and effective way. Japan does it and France does it, and it doesn’t have greenhouse gas emissions, so it would be stupid for us not to do that in a much more effective way.”

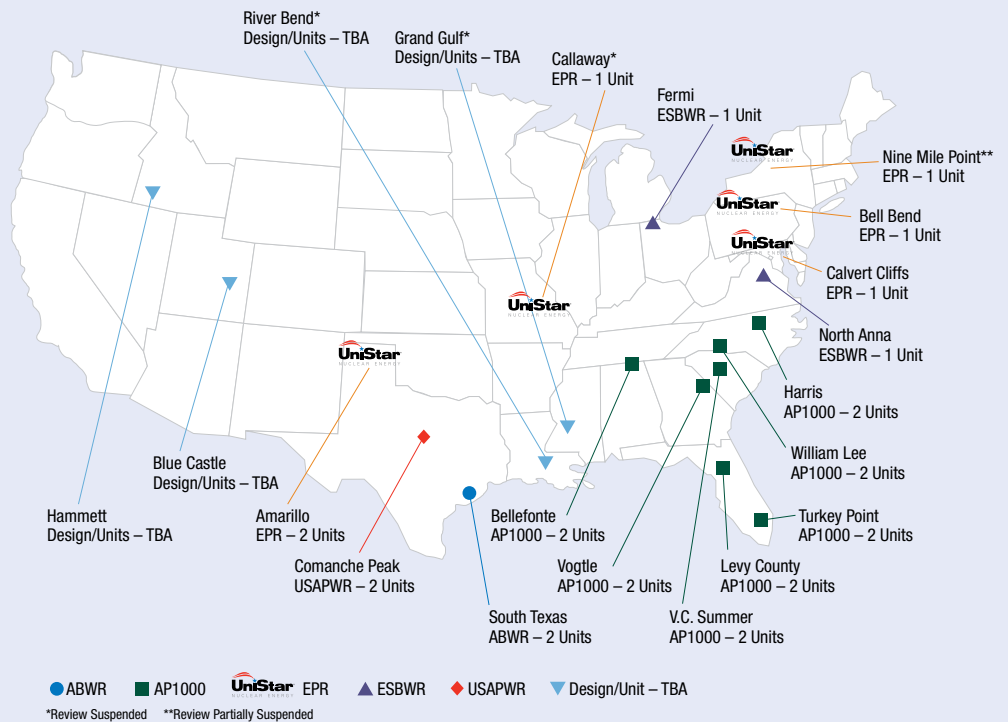
– Barack Obama, Town hall meeting in New Orleans, October 15, 2009

## PROPOSED NEW NUCLEAR ENERGY FACILITIES

The U.S. Nuclear Regulatory Commission has received combined license applications for 26 new nuclear reactors.<sup>14</sup> If all are built, that could mean:

- More than 104,000 construction jobs
- \$12 billion in annual expenditures
- 10,400 permanent jobs
- \$560 million added to local tax revenues

*If the NRC approves all the applications it has received for new nuclear energy facilities, it could mean a windfall of new jobs and money for the economy. Source: Nuclear Regulatory Commission*



If you want to look closer at the research behind the information in this publication, please visit our web site at [www.unistarnuclear.com](http://www.unistarnuclear.com). There you will find an annotated version of this Issue Brief with links to the original research and other data behind this publication as well as all of the other publications in the Issue Briefs series.

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*This UniStar Issue Brief is a publication of UniStar Nuclear Energy, a joint venture of Constellation Energy and EDF Group. It is one in a series of Issue Briefs presenting information and interpretation on important issues surrounding the growth of electrical generation in the United States. UniStar and its partners are working to meet future energy needs with a new generation of nuclear generating facilities, the most effective combination of clean, reliable, and environmentally-friendly electrical production. We have confidence that an informed public armed with the facts behind our energy options will support increasing the role of nuclear generation for meeting the nation's future electricity demand. The Issue Briefs series is just one part of UniStar's efforts to keep the public fully informed. ©2009 UniStar Nuclear Energy. All rights reserved.*