AREVA is America’s largest supplier of innovative solutions for carbon-free energy. We are the biggest employer in the nuclear energy sector with 6,000 highly skilled workers at 45 sites across the United States. AREVA has hired 700 new employees each year over the past few years and is creating 300 new American jobs each year for the next five years.

AREVA generates more than $2 billion in annual revenue, and directly contributes $135 million to the U.S. tax base. Through business with our 5,000 American suppliers, AREVA injects $1.3 billion each year into the U.S. economy, supporting the creation of 9,000 jobs.

We are not just building nuclear power plants, we are building an industry that provides a tremendous boost to American energy infrastructure and the U.S. economy while creating thousands of jobs.
How AREVA is Building a U.S. Energy Base and Supporting the National Economy

U.S. EPR™ Reactor

First and only Generation III+ nuclear power plant currently under construction around the world
Evolutionary reactor design to meet America’s growing clean energy demands
Eight reactors under consideration for America by U.S. utilities

• $200 million already invested in the certification process for the U.S. EPR™ reactor
• Recruitment of 500 additional engineers
• Each U.S. EPR™ reactor project will create approximately 3,000 construction jobs during peak construction. Over the seven-year construction period, the total economic output will be $8.9 billion and almost 40,000 jobs created or induced.
• During operation, the average nuclear plant generates more than $260 million in combined federal, state, and local tax payments and close to 4,500 jobs throughout the economy.

AREVA Newport News, LLC

Joint venture with Northrop Grumman Shipbuilding to produce heavy reactor components at a new facility in Newport News, Virginia
Domestic source of critical heavy reactor components for the U.S. EPR™ Reactor

• $360 million construction project launched in July 2009
• Creation of 500 skilled manufacturing and salaried jobs

Eagle Rock Enrichment Facility

AREVA’s planned uranium enrichment facility to be built in Bonneville County, Idaho
Domestic supply of uranium enrichment needs for 25% of U.S. nuclear power plants

• A multi-billion-dollar direct investment in nuclear energy infrastructure
• Creation of an estimated 5,000 direct and indirect American jobs
• Economic impact estimated at more than $5 billion

Shaw AREVA MOX Services LLC

Prime contractor for the Department of Energy Mixed Oxide (MOX) Fuel Fabrication Facility near Aiken, South Carolina
A major component in the United States weapons disposal program, the MOX facility will convert former weapons material into commercial reactor fuel

• Already employing 1,600 people on site
• $500 million invested in the United States through MOX suppliers

ADAGE

Joint venture with Duke Energy to develop biopower facilities (biomass to power) throughout the United States
One facility will provide renewable energy for 40,000 homes
Two proposed projects for Florida and one project for Washington state

• $105 million in direct economic impact
• 700 direct and indirect jobs

Modernizing and Investing in American Energy Technology

Providing services to 50 percent of Pressurized Water Reactors and 25 percent of Boiling Water Reactors in the United States

• $6.5 million invested in a Chemistry and Materials Center to perform testing and analysis for improved efficiency of plant components and fuel
• Invested approximately $40 million in U.S. fuel fabrication lines during the past five years, including $10 million during 2009

AREVA can create even more American jobs.

AREVA is the world leader and expert in the field of recycling spent fuel. Recycling provides an answer to current spent fuel storage concerns, reducing both volume and toxicity, and providing an additional source of nuclear fuel. But this solution also means the creation of thousands of jobs.

Construction of an 800mTHM recycling facility would create 12,000 jobs, including 1,000 design jobs. During operation, it would require 2,500 permanent personnel. An infrastructure project of this magnitude has the potential to spur a substantial economic impact and create 70,000 indirect jobs overall.
Mining and Front End Business Group

Through its Mining and Front End Business Group, AREVA provides North American nuclear reactors with a reliable supply of uranium products and services (conversion, enrichment and fuel fabrication).

This Business Group works closely with all North American utilities and also with the U.S. Government through AREVA Federal Services, LLC.

The Mining and Front End Business Group covers four main activities:

Mining

AREVA customers benefit from the global resources of the AREVA group, the third largest uranium producer in the world, with a diversified mining portfolio in North America, Africa and Asia.

Representing AREVA’s mining operations in North America, AREVA Resources Canada Inc. has been exploring for uranium, developing uranium mines and producing uranium concentrate for over 40 years in Canada. AREVA Resources is headquartered in Saskatoon, Saskatchewan and operates projects throughout the province, producing over 7 million pounds of uranium oxide in 2008. With a majority of significant interests in major projects, AREVA Resources is well positioned as an important supplier of uranium concentrates to electrical utilities worldwide.

Conversion

AREVA provides conversion services performed by AREVA subsidiary COMURHEX. AREVA is the world leader in uranium conversion, with a processing capacity of 14,000 tons per year and a 25 percent share of the global market.

AREVA has an important objective for the future: to strengthen its leadership position in conversion services while enhancing its sustainable development commitments. To achieve those goals, AREVA has begun rebuilding and modernizing its conversion facilities to increase production efficiency while reducing environmental impacts and improving safety.

CONSIDER THESE FACTS...

- The Eagle Rock Enrichment Facility (Eagle Rock) represents a direct investment in the U.S., Idaho and the local economies, including:
  - A direct multi-billion dollar investment in the construction of the Eagle Rock Enrichment Facility
  - An estimated $5 billion impact on regional and local economies
  - Eagle Rock will generate 5,000 direct and indirect jobs.
  - Eagle Rock will contribute to U.S. energy security by supplying a domestic source of uranium enrichment for nuclear power plants.
Enrichment

AREVA historically marketed uranium enrichment services provided only by EURODIF, the operator of the Georges Besse gaseous diffusion plant in France. However, AREVA has broadened its offering with the construction of Georges Besse II, which will feature newer energy-saving centrifuge technology. Georges Besse II will begin operations in late 2009 and will eventually replace the diffusion facility. Here in the United States, AREVA is working to meet the increasing demand for uranium enrichment services and has made significant progress on a new project in Idaho to build and operate the Eagle Rock Enrichment Facility.

The proposed U.S. plant will provide domestically performed enrichment services for America’s nuclear power industry using proven centrifuge technology, which requires substantially less electricity than the gaseous diffusion method of enrichment. The plant will have a production capacity of 3 million separative work units or SWU* and is scheduled to enter service in 2014.

*An enrichment plant’s production is expressed in SWU.

Fuel Fabrication

AREVA provides both BWR and PWR reactor fuel assemblies and related field services, as well as a range of fuel inspection and repair systems. Given the latest direction from the Institute of Nuclear Power Operations targeting zero fuel failures by 2010, AREVA has instituted a Zero Tolerance for Failure standard with the goal of continually raising the quality level of the company’s fuel business products and processes.

AREVA recently invested $50 million to install advanced fuel manufacturing lines at both of its U.S. fuel fabrication facilities, located in Richland, Wash. and Lynchburg, Va. The investment was made after thorough evaluation of the “best practices” in use at the group’s U.S. and European facilities.
AREVA’s Reactors & Services Business Group specializes in the design, construction and servicing of pressurized water reactors (PWRs), boiling water reactors (BWRs) and research reactors, as well as in the manufacture of radiation detection and analysis instrumentation.

The Reactors & Services Business Group includes AREVA subsidiary CANBERRA Industries, Inc. and also works through AREVA Federal Services, LLC for U.S. Government contracting. This Business Group is organized around four sectors of activity.

**Plants**

With expertise covering nuclear steam supply-systems and nuclear-island design, construction and start-up, our Plants sector offers solutions tailored to meet any complex nuclear engineering requirement. We are committed to improving the existing nuclear fleet’s plant safety and performance by reducing risk and increasing reliability, while helping customers cut costs.

**Supporting new plant deployment: AREVA’s U.S. EPR™ Reactor**

Fully supporting the deployment of new plants and the rebirth of the nuclear industry in the United States, AREVA’s Plants sector has designed the U.S. EPR™ reactor. With multiple investments already in place in the U.S. supply chain, including the addition of the new AREVA Newport News large nuclear component manufacturing facility, U.S. EPR™ reactors will be built in America by Americans.

**Consider these facts...**

- There are eight U.S. EPR™ projects under consideration, and companies have submitted license applications for four new plants.
- AREVA has formed a joint venture with Northrop Grumman Shipbuilding to produce heavy reactor components at a new facility in Newport News, Va.
- Construction of the $360 million AREVA Newport News facility was launched in July 2009.
- The AREVA Newport News facility will create 500 new jobs.
- AREVA is hiring some 500 additional engineers to develop the U.S. EPR™ reactor for the American market.
- Each of AREVA’s new U.S. EPR™ projects will create up to 4,000 construction jobs and 400 to 700 permanent jobs.
- AREVA’s objective is to capture one-third of new reactor builds between now and 2025.
Services

In addition to helping utilities improve plant reliability and performance, our Services sector offers to help them cut costs by bundling integrated service packages based on a full range of inspection and maintenance services. These include outage services, non-destructive inspections, engineering services and primary component services — among many others — for all types of nuclear reactors. We also provide a full range of pump and motor services and steam generator services, including state-of-the-art technology for the secondary side.

As part of its mission, our Services sector has made the following investments:

• $6.5 million in its 6,800 square foot Chemistry and Materials Center
• $12 million in a 70,000 square foot Pump and Motor Service Center, and
• $3 million+ in the 27,000 square foot Technical Training Center.

The Technical Training Center provides advanced training for up to 1,000 professional nuclear technicians each year. Our service personnel benefit from this facility, the most sophisticated of its kind in the United States, by learning the latest techniques to minimize radiation exposure, enhance personnel safety, reduce outage time and lower costs.

Equipment

The Equipment sector has the manufacturing capability to produce the industry’s broadest range of nuclear power plant equipment and components. Through its customers’ shared experience, this sector benefits from more than 1,500 reactor years of nuclear plant operation, which enhances technological know-how, as well as manufacturing capabilities.

This sector manufactures all of the main nuclear steam supply system components, including reactor vessels, reactor vessel heads and internals, steam generators, pressurizers, reactor coolant pumps and motors, control rod drive mechanisms and in-core instrumentation systems.

Nuclear Measurements

AREVA subsidiary CANBERRA is the worldwide leader in nuclear measurements, providing instrumentation and systems for radiation detection and analysis (alpha, beta, gamma) on a turnkey basis. CANBERRA’s “Measurement Solutions for Safety and Security” serve the following sectors: the nuclear energy industry (for both nuclear fuel cycle and facility applications), commercial and university laboratories, and homeland security and the armed forces.

The company’s range of equipment and systems can be applied to the following requirements, among others: border security, first response, emergency management, transportation, facility security and training. CANBERRA is the only company in nuclear measurements that focuses primarily on the nuclear industry, offering solutions to customers from a single supply of products and services.
Back End Business Group

The AREVA group’s Back End Business Group draws on more than 40 years of experience designing and implementing fuel-cycle technologies and services. The Business Group operates in the U.S. market through two group entities: Transnuclear, Inc. and AREVA Federal Services, LLC.

Transnuclear provides the U.S. commercial nuclear energy industry with used fuel management technologies and services, including packaging and transportation, and specific decontamination and decommissioning (D&D) expertise.

AREVA Federal Services supports the U.S. Department of Energy (DOE).

Used-Fuel Management

AREVA, through Transnuclear and AREVA Federal Services, excels in the field of used-fuel management, with experience covering cask design; used-fuel handling, packaging and transportation; and solutions for interim dry storage.

AREVA has been highly successful proposing solutions to utilities for the safe temporary storage of nuclear fuel after it leaves the reactor. Through Transnuclear, AREVA has been a long-term supplier of used-fuel dry interim storage solutions to utilities choosing this approach. Transnuclear leads the U.S. industry in this field, with more than half of U.S. commercial used fuel currently in interim dry storage having been placed in systems supplied by the company.

AREVA also has extensive experience working with prime contractors at the DOE Hanford Site, retrieving, packaging and transporting used fuel. As part of USA Repository Services LLC, AREVA is contributing surface facility design and expertise in support of the DOE repository project at Yucca Mountain in Nevada.

CONSIDER THESE FACTS…

The back end of the nuclear fuel cycle in the United States:

- Approximately 2,000 metric tons of used nuclear fuel are unloaded each year from the entire U.S. reactor fleet.
- More than 60,000 metric tons of used fuel have been unloaded over the past 40 years and are now being stored at reactor sites around the country.
- These 60,000+ metric tons of used fuel, if recycled, would provide enough fuel to power all 104 U.S. reactors for nearly seven years.

AREVA’s expertise in used nuclear fuel management:

- Through subsidiary Transnuclear, more used fuel in the United States is stored in AREVA systems than in all other dry storage systems combined.
- AREVA has more than 40 years of successful industrial experience in used-fuel recycling.
**Engineering Technology And Services**

AREVA provides proven, world-class, state-of-the-art engineering services and technical support to DOE site prime contractors, and as a member of Shaw AREVA MOX Services, LLC (MOX Services), to the U.S. Plutonium Disposition Program.

**DOE Programs — Environmental Management**

AREVA is working on several projects at DOE’s Hanford Site in southeastern Washington State:

- Helping to dispose of radioactive sludge located in former used-fuel storage basins,
- Applying engineering “hot cell technology” to the retrieval of transuranic waste,
- Preparing liquid radioactive waste for further processing at the Hanford Waste Treatment Plant,
- Providing a chemical cleaning process as a final step in cleaning some of the site’s storage tanks.

At DOE’s Savannah River Site in South Carolina, AREVA is responsible for developing and implementing enhancements to the vitrification (glassification) processes as part of a contract to treat and dispose of high-level radioactive liquid wastes. AREVA is studying the adaptation of a proprietary technology that could be used to vitrify specific high-level liquid waste streams at DOE’s Hanford and Savannah River Sites.

**DOE Programs — Nuclear Energy**

AREVA has supported DOE in developing studies on implementing used nuclear fuel recycling in the United States. These studies, originally carried out for DOE under the auspices of the GNEP program, continue with corporate support from AREVA. AREVA supports recycling as a viable strategy to manage the nation’s growing used-fuel and high-level waste backlog, as well as to conserve resources.

**National Nuclear Security Administration — U.S. Plutonium Disposition Program**

This program will dispose of at least 34 metric tons of surplus weapons-grade plutonium by turning the material into mixed-oxide (MOX) fuel for use in commercial nuclear power plants. Shaw AREVA MOX Services, LLC began construction of the Mixed-Oxide Fuel Fabrication Facility at Savannah River in 2008. MOX Services plans on completing the plant in 2014 and starting operations in 2016. The company recently executed a Letter of Intent with Tennessee Valley Authority (TVA) to evaluate the use of MOX fuel in two or more of TVA’s reactors.

**AREVA’s engineering expertise**

AREVA’s expertise includes process engineering, remote sensing and robotics, non-destructive examination, project management and design support. Projects include the following, among others:

- Development of nuclear waste pretreatment solutions to facilitate further treatment options
- Design and fabrication of specialized containers for the transportation and storage of waste from former weapons complex clean-up operations
- Expertise in plutonium treatment and mixed-oxide (MOX) fuel fabrication
AREVA recognizes the important role that renewable energies can play by complementing nuclear power in a CO₂-emissions-free energy mix for the United States. Renewable energies have become a valuable carbon-free solution as America strives to secure the nation’s energy supply, increase U.S. economic vitality and battle climate change.

Because renewable resources are unevenly distributed among our nation’s regions, AREVA has created a portfolio of solutions based on wind, solar and bio-energy sources. Our portfolio also includes energy carrier and storage solutions.

AREVA provides an array of complementary solutions that could help U.S. utilities meet Renewables Portfolio Standard obligations of 15 to 20 percent of their generation output.

**Bio-Energies**

Capitalizing on opportunities in the fast-growing bio-energies U.S. market, AREVA and Duke Energy launched ADAGE™, an industrial partnership offering biopower* electricity solutions for U.S. utilities. ADAGE™ uses wood debris from forest operations to generate electricity. ADAGE’s™ mission is to design, build and operate a fleet of standardized wood biomass power plants, bringing to commercial scale this under-used renewable electricity source. ADAGE™ expects to have 10 to 12 plants under construction in the United States by 2014. ADAGE™ provides fully integrated, turnkey solutions by negotiating Power Purchase Agreements and fuel contracts, securing suitable sites for each project, and managing all aspects of the projects from cradle to grave. Building and operating ADAGE™ biomass plants in the U.S. provides several advantages:

- **ADAGE™ biomass plants create thousands of high-paying, sustainable, green-collar jobs.**
- **This plentiful green energy source is a carbon-neutral, non-intermittent energy source.**
- **Excess biomass removal creates healthy forests, less prone to wildfires and insect infestation.**
- **Domestic biomass sources contribute to the nation’s energy security.**

The environmental commitments outlined in the ADAGE™ strategic plan were featured at the Clinton Global Initiative 2008 Annual Meeting in New York.

*Biopower uses biomass (renewable organic material, such as from plants or animal waste) to generate electricity.

**Consider These Facts...**

- A single 50-megawatt wood biomass plant generates enough electricity for 40,000 households, avoiding net emissions of 400,000 tons of CO₂ per year in the process. Wood biomass currently produces approximately 7,000 megawatts of electricity in the U.S., an output expected to roughly double by 2020.
- With more than 100 plants in operation in the world, AREVA has more expertise in building biomass plants than any other company; to date, AREVA-built biopower facilities outside the United States have already saved a combined 3 million tons of CO₂ equivalent per year.
Wind Power

Analysts expect wind power’s share of the energy market to continue expanding on a global scale. AREVA broke into the fast-growing off-shore branch of the market with the acquisition of a 51 percent stake in Multibrid, a high-output offshore wind turbine designer and manufacturer.

Multibrid developed the M5000 technology, a 5 megawatt (MW) turbine that is among the largest commercially viable turbines to date. The M5000 is the only turbine in the marketplace specifically designed for offshore and marine conditions.

AREVA Multibrid has sold more than 180 M5000 turbines, which represents more than 900 MW in capacity. AREVA Multibrid recently won a $1 billion contract to provide 80 M5000 turbines for a 400 MW farm in Europe, one of the largest offshore wind farms in the world. This farm will provide electricity for one million users.

AREVA is extending its success to the United States, where the offshore wind market is emerging with support from developers, utilities and policy makers. With total potential resources of 430,000 MW in the United States, analysts project installed capacity at 6,000 MW by 2020.

Advantages of offshore wind include the following:

- Creation of thousands of high-paying, sustainable, green-collar jobs,
- Production of carbon-free electricity using turbines that are not very visible from the shore,
- Installation near large population centers on both coasts and around the Great Lakes,
- More plentiful renewable energy capacity for individual states,
- Greater capacity given stronger, steadier off-shore winds,
- Creation of artificial reefs for fish spawning without shipping/fishing interference.

Solar Power

AREVA is focusing on Solar Thermal Energy Generation (STEG), which offers competitive, utility-scale power solutions. In the Southwest, STEG produces energy during the warmest hours of the day, a tremendous advantage given that, at the same time, air-conditioning needs increase the load placed on electricity grids.

At AREVA, we plan to contribute to the renewed growth of the solar industry by providing to U.S. utilities both our reliable energy solutions and our large-scale industrial construction expertise.

Energy Carrier and Storage

Energy generated by the sun and wind can be intermittent sources of power. By developing energy storage solutions, AREVA will enable our utility customers to store energy from these valuable sources and distribute it according to grid-load needs.