# AREVA – Re-Building an American Industry

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### Introduction

- AREVA Overview
- ► The Global Nuclear Renaissance
- ▶ What will it take to re-build the U.S. Nuclear Industry?
- ► AREVA's Contribution to the U.S. Nuclear Renaissance
- Conclusion



## **AREVA Overview**



# AREVA: A Global Industrial Group Focusing on CO<sub>2</sub>-Free Energy





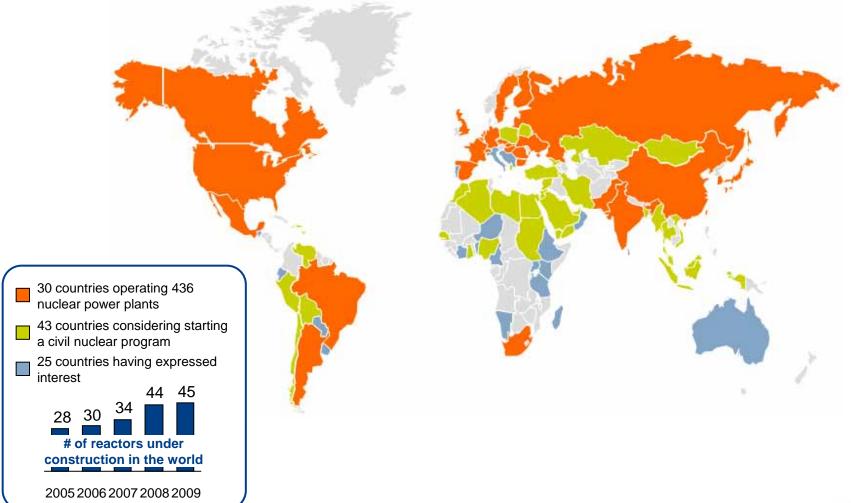
AREVA is #1 in nuclear and growing rapidly in renewables



# The Global Nuclear Renaissance



## Nuclear Energy is Global and a Revival is Underway

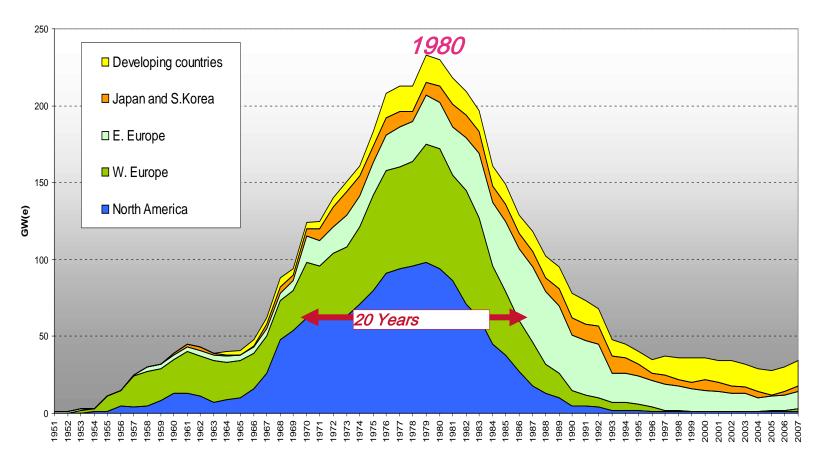




# What will it take to re-build the U.S. Nuclear Industry?



## **Nuclear Manufacturing Must be Rebuilt**



source: IAEA 2008



## What will it take to Re-build the Nuclear Energy Industry?

Unwavering commitment to SAFETY

► Long-term vision and bi-partisan support

Initial loan guarantees followed by on-time, on-budget delivery

Fully developed supply chain



# AREVA's Contribution to the U.S. Nuclear Renaissance



## What does AREVA bring to the American Industry?

Technology

Experience

**▶** Infrastructure

Job Creation







EPR by AREVA

More than 20 EPR™ Reactor Projects under Development Worldwide

- Under construction
- Under development
- Prospects



- UK
- u 4 units announced by EDF
- 4 units targeted with E.ON/RWE
- Further units GDF SUEZ/Iberdrola/SSE
- Industrial partnerships with Balfour Beatty and Rolls Royce covering engineering, manufacturing and construction



#### **FINLAND**

U OLKILUOTO 3 under construction



#### FRANCE

under construction



#### **CHINA**

TAISHAN 1&2, 2 units under construction



#### USA

- Design Certification Application submitted in Dec. 2007 and expected by 2012
- Detailed Design underway
- 4 Combined License
  Applications referenced by NRC
- U Duke Energy is currently evaluating the EPR™ technology for the Piketon, Ohio site



#### FRANCE

- U Second EPR™ project for EDF, GDF SUEZ, Total, Enel and possibly E.ON in Penly
- U Possible 3<sup>rd</sup> EPR™ project under discussion



- 4 units announced by EDF and Enel through the JV SNI
- Further potential units with European utilities that have declared interest in contributing to the Italian nuclear program; no formal setup yet



#### **INDIA**

- Memorandum of Understanding with NPCIL for 6 EPR™ reactors at the Jaitapur site; offer for 2 EPR™ reactors
- Strategic alliance with Bharat Forge
- Framework agreement with TCE Consulting Engineers (Tata) for engineering services
- Licensing launched

#### **PROSPECTS**

 Brazil, Canada, China, Czech Republic, Finland, Lithuania, Poland, Switzerland, the Netherlands

#### **REPUBLIC OF SOUTH AFRICA (RSA)**

- U RSA is speaking about a fleet approach (Integrated Resource Plan) with about 10,500MWe by 2018 and 21,000 MWe by 2035
- Localization will be a key issue



## Olkiluoto 3





### Flamanville 3





### Taishan 1 & 2





## **UniStar Calvert Cliffs 3 Project**

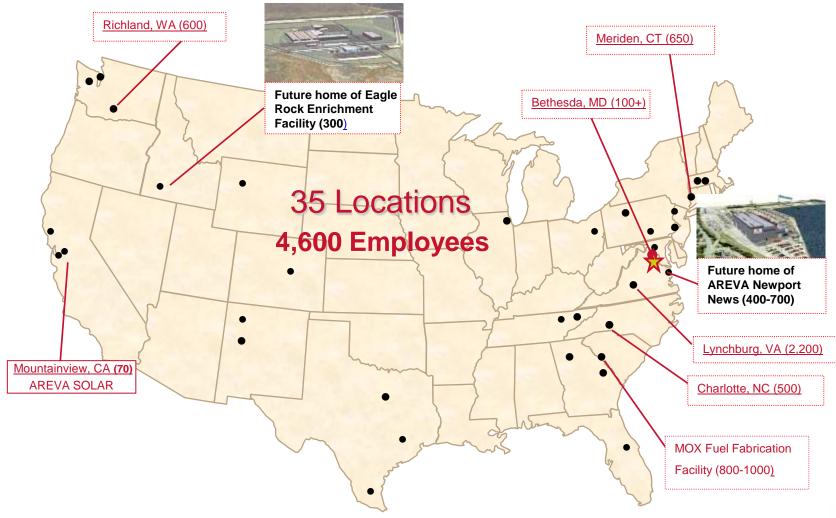




The first U.S.  $EPR^{TM}$  project is moving forward!



# AREVA is Present and Growing in the U.S. CO<sub>2</sub>-Free Energy Market





## **Eagle Rock Enrichment Facility**

- Project on track to produce SWU in 2014
  - Conditional Loan Guarantee secured- \$2 billion to finance Eagle Rock
  - NRC expected to issue license mid-2011
  - □ Site Prep to begin 2011 under an NRC approved Limited Work Authorization
  - Plant to start commercial production in 2014
  - Dedicated and experienced team to help fuel our future clean energy economy





# AREVA Newport News Heavy Equipment Manufacturing Facility

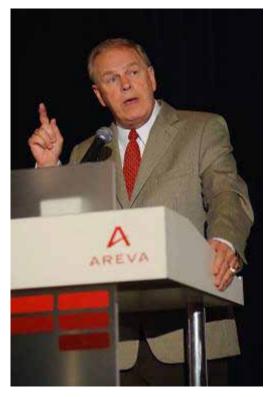
- Newport News Facility
  - - A new U.S.-based manufacturing facility for heavy components for AREVA's EPR™ reactor customers
    - Leverages Northrop Grumman Ship Building skilled resources for engineering and field support
    - Option to expand to meet global demand for heavy components
- \$363 million project cost
- 540 permanent jobs
- Status
  - **□** Groundbreaking July 22, 2009
  - **□** Begin operations in 2013





## AREVA Supplier Days in Maryland and Ohio







>200 attendees from >100 companies at each event



## **Clean Energy Jobs**

New Jobs	Year 1	<u>Highest Year</u>	<u>r</u>
Direct	800	3,000	Site construction workers
Indirect	600	2,200	Vendors for equipment and services
<u>Induced</u> Total	700 2,100	<u>2,500</u> 7,700	Service jobs created in food, hotel, entertainment and other industries



Building new nuclear power plants creates thousands of high quality jobs and sustainable economic development



### Conclusion

# Building today means energy and economic security tomorrow

