
Westinghouse and the AP1000[®]

Offering Great Opportunity for the Czech Republic

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Westinghouse is the Only Company Solely Focused on Commercial Nuclear Technology

Nearly 50 percent of the nuclear power plants in operation worldwide, and nearly 60 percent in the United States, are based on Westinghouse technology



- The AP1000 is the technology of choice for more than half of the new plants identified in the U.S.
- The only certified Generation III+ technology by the US Nuclear Regulatory Commission (NRC)
- First Generation III+ plants under construction in China and US

Our Business Today: Four Product Lines – Regionally Delivered

Nuclear Services

Focused on operating plant success through reliable operation, maximized power output and better (shorter, more predictable) outages



Nuclear Power Plants

Specializing in the technology of new nuclear power plants and component manufacturing



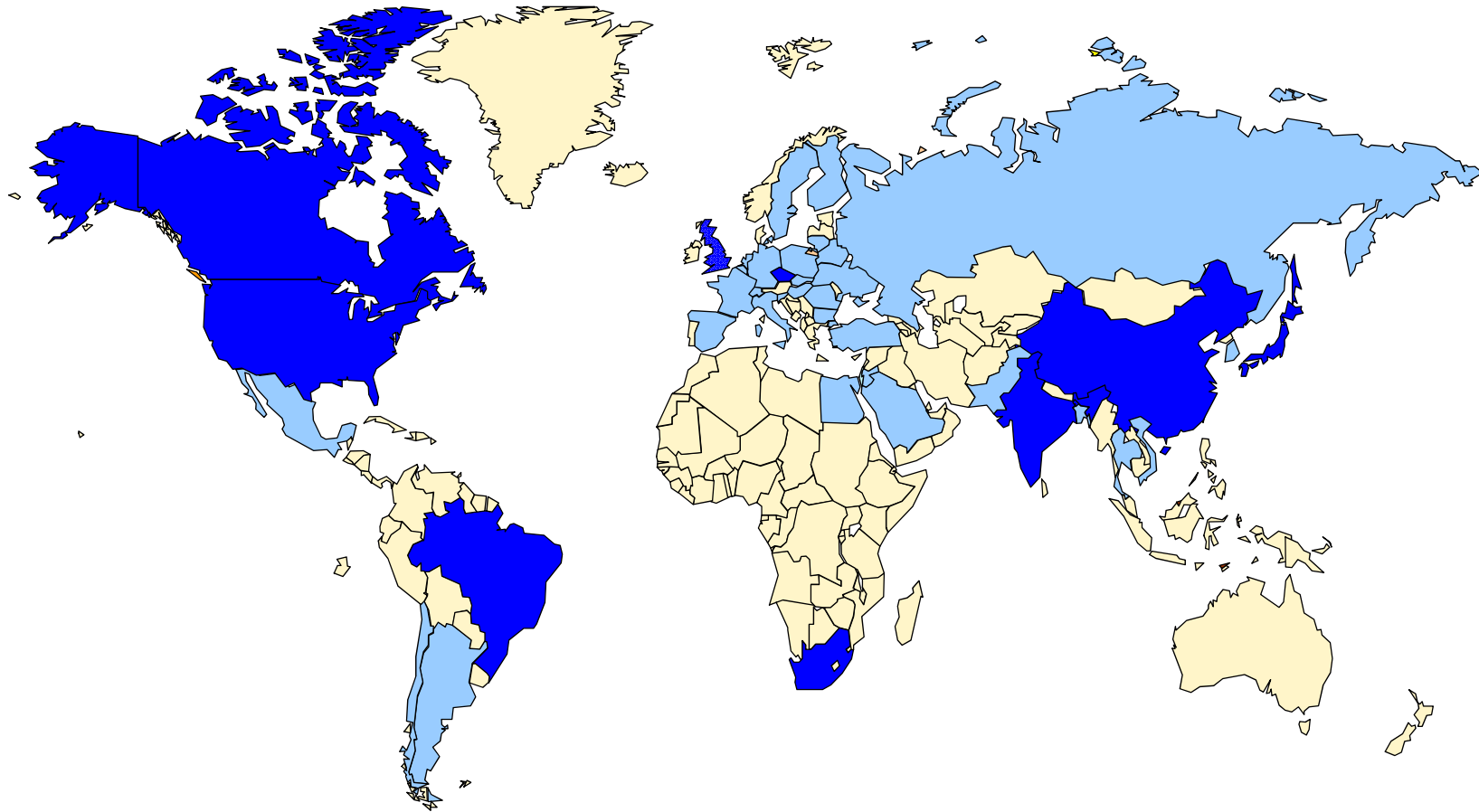
Nuclear Fuel

A single-source fuel provider for PWR, BWR, VVER, AGR and Magnox reactors worldwide

Nuclear Automation

Instrumentation and control systems to enhance the reliability of nuclear plant control and safety systems

Potential Westinghouse Projects Span the Globe



AP1000® International Projects

China projects are under construction and on-schedule for 2013

- **Four AP1000 Nuclear Power Plants are currently under construction**
 - **2 Units in Sanmen, Zhejiang Province**
 - **2 Units in Haiyang, Shandong Province**
- **First two units operational in 2013 and 2014**



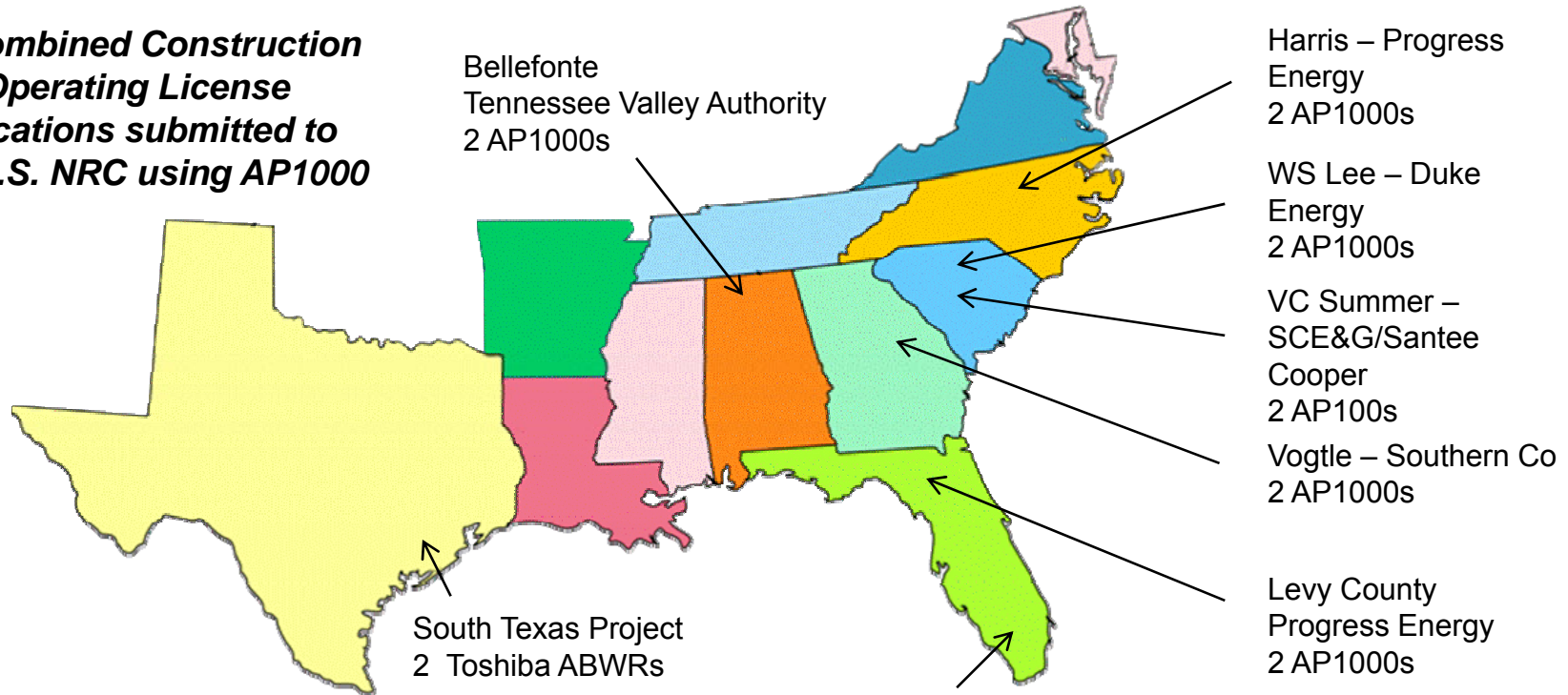
First unit at Sanmen is on-schedule for 2013

AP1000 International Projects

The first four AP1000 U.S. units are under construction

Six AP1000 units under contract - the first nuclear plant contracts in the U.S. in 30 years. Eight additional AP1000 units planned


14 Combined Construction and Operating License applications submitted to the U.S. NRC using AP1000



The Pillars of the Nuclear Renaissance

AP1000 answers stakeholder needs for new-build

The Nuclear Renaissance



**Inherent
Safety**

**Energy
Security**

**Economic
Responsibility**

Reduction of risk forms the foundation of all three pillars

AP1000: Designed for Greater Certainty

Built on the pillars of the nuclear renaissance



- Passive Safety utilizes natural forces such as gravity-- results in less material, maintenance and operation costs
 - No need for operator action for at least 72 hours
 - No need for external power or external supplies of cooling water
- Modular design drives faster, predictable construction schedule
- NRC-licensed design reduces licensing risk
- 1,100 MWe easily supports existing grid infrastructure

Result:

- *Greater Levels of Safety and Quality*
- *Reduced Construction Time, Greater Schedule Certainty, and Lower Costs*



AP1000: Designed for Greater Certainty

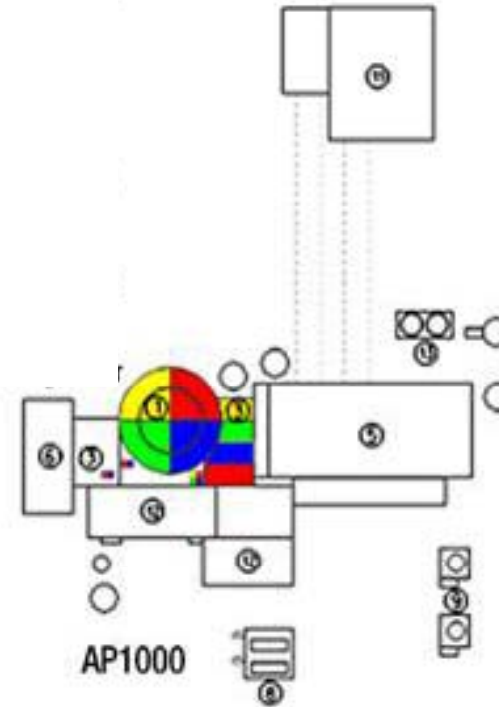
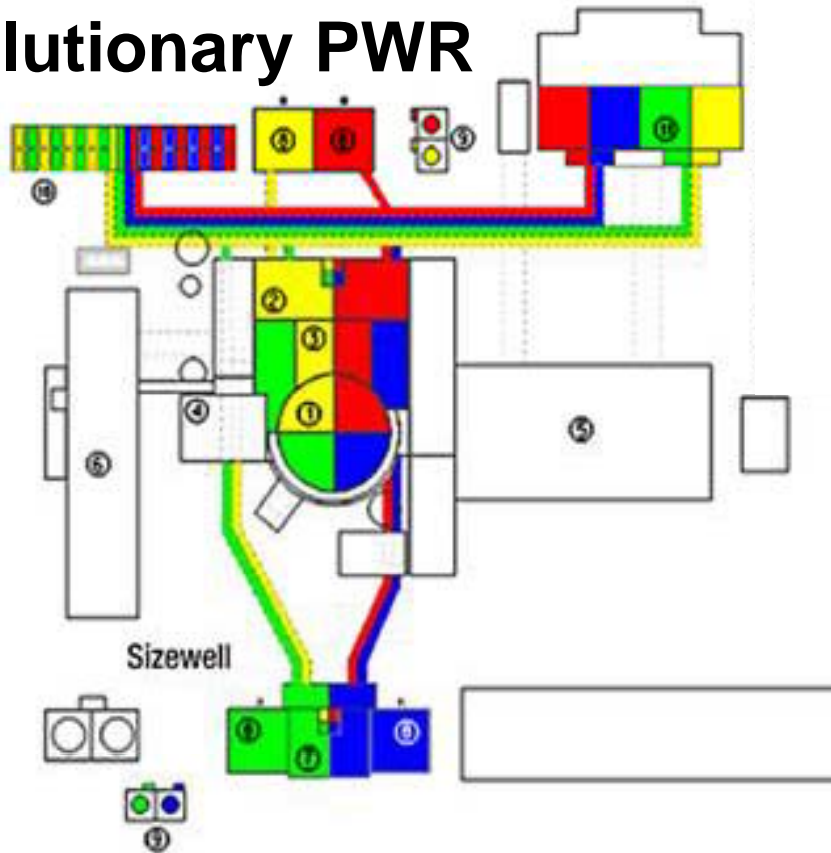
How AP1000 Reduces Project Risk



AP1000: Designed for Greater Certainty

Simplification Means the Smallest Nuclear Footprint

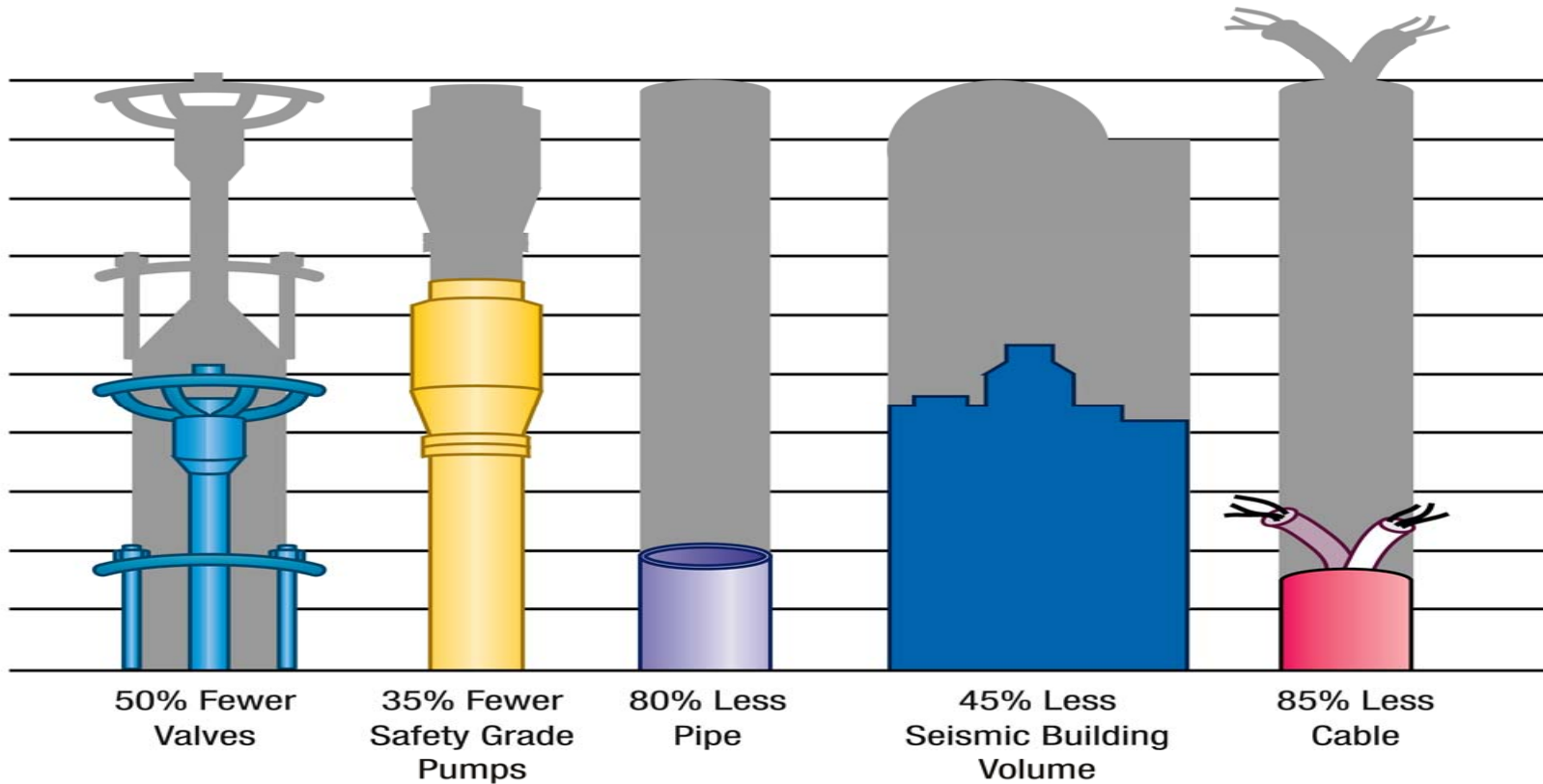
Evolutionary PWR



AP1000

AP1000: A Renaissance in Plant Design

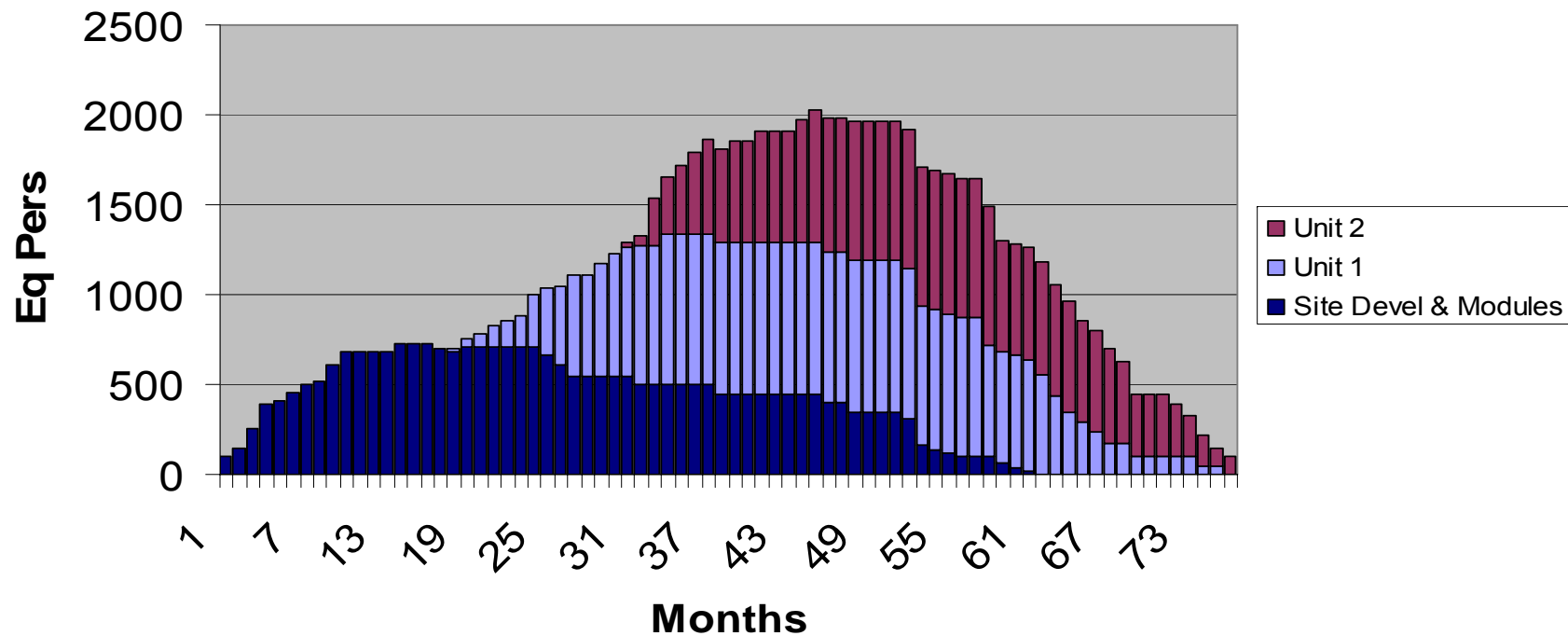
Less Equipment, Less Maintenance, *and* Less Risk



70% of AP1000 components are non-safety related

Typical Project Socio-Economic Impact

Project Construction Staffing - Including Module Fabrication



Up to 2,000 direct jobs with additional ripple-effect to economy

Supply Chain Management

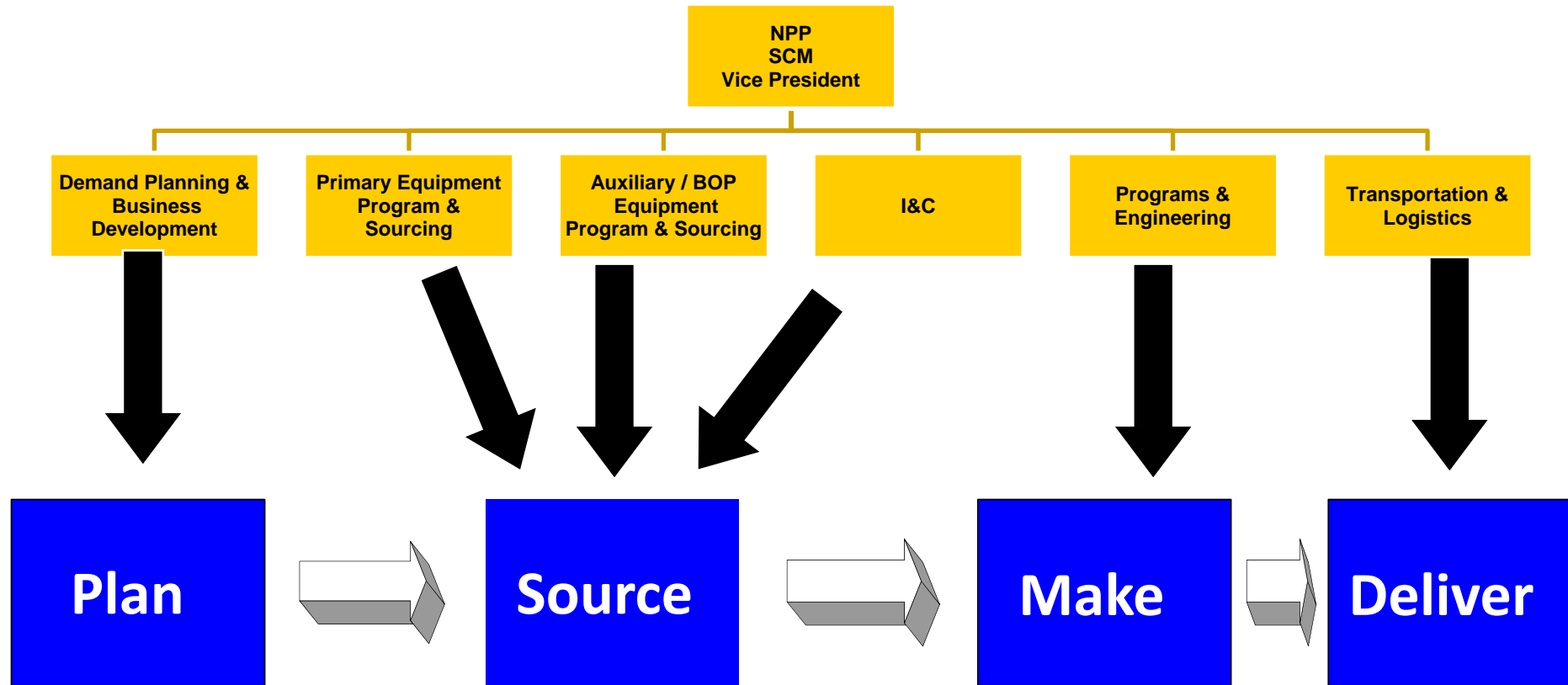
Tim Drouin

Supply Chain Vision / Goals

Supply Base as a partner with Westinghouse in the AP1000 Integrated Global Supply Chain network

- Safety
 - Nuclear
 - Personnel
- Quality
- Optimization of Cost & Delivery
 - Lowest landed cost
- Schedule Certainty
- Standardization

SCM Organization Integrated Supply Chain



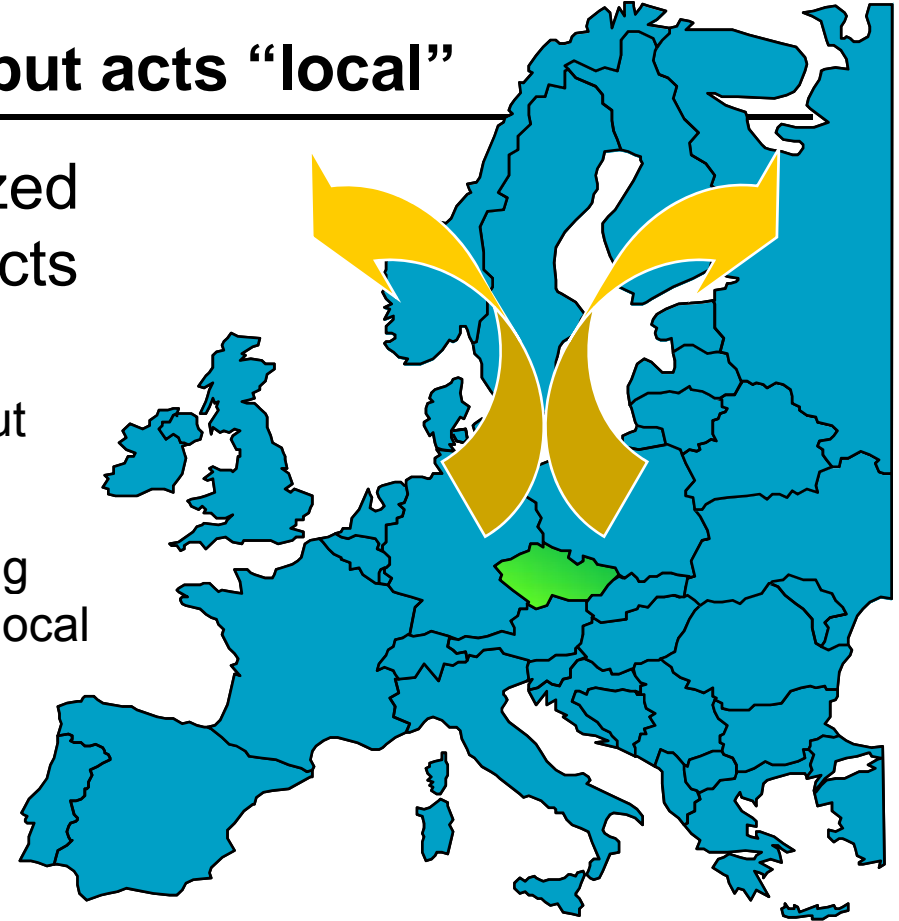
WEC Supplier Expectations

- An unwavering commitment to quality and safety
- Value the prevention of errors
- Own and proactively solve problems
- Aggressive and predictable in terms of delivery
- Able and willing to share in the risk for future business as demand grows
- Utilize lessons learned for continuous improvement
- Teamwork
- Optimization of Cost & Delivery - Lowest landed cost
- Schedule Attainment
- Make local suppliers competitive

Supply Chain Development is Critical

Westinghouse thinks “global” but acts “local”

- **Buy Where We Build™** localized supply chain approach to projects
- Use currently available local/regional suppliers consistent with the fleet build-out schedule
- Develop upgraded documentation, training and skills needed in partnership with the local regulator/government
- Expand capabilities consistent with market growth, both locally and across Westinghouse global projects



This approach will be used in the Czech Republic for European projects such as those in the United Kingdom

A Substantial Role for Czech Industry

For Czech, European, and Global Projects

Westinghouse understands that Czech industry provides a strong base for manufacturing and supplying:

- *Precision-machined components*
- *Instrumentation and control components*
- *Nuclear island primary components*

Westinghouse is in the process of developing a number of Czech companies as major equipment suppliers for its global supply base.

Westinghouse is Committed to Czech Industry

Building on an existing 20-year relationship

Westinghouse has a long and rich historical relationship with Czech industry that dates to the completion of Temelin 1 and 2:

- ***I&C Energo, a.s.***
- ***ZAT a.s.***
- ***SKODA JS a.s.***
- ***OSC, a.s.***
- ***UJV Rez, a.s.***
- ***Energovyzkum***
- ***Vitkovice***
- ***Energoproject Praha***
- ***ARIS, a.s.***
- ***ABEGU, a.s.***
- ***Regula, a.s.***
- ***SKODA Praha***
- ***AFRAS Energo s.r.o.***
- ***EGV Brno***
- ***VUJE Trnava***
- ***Skoda Power***

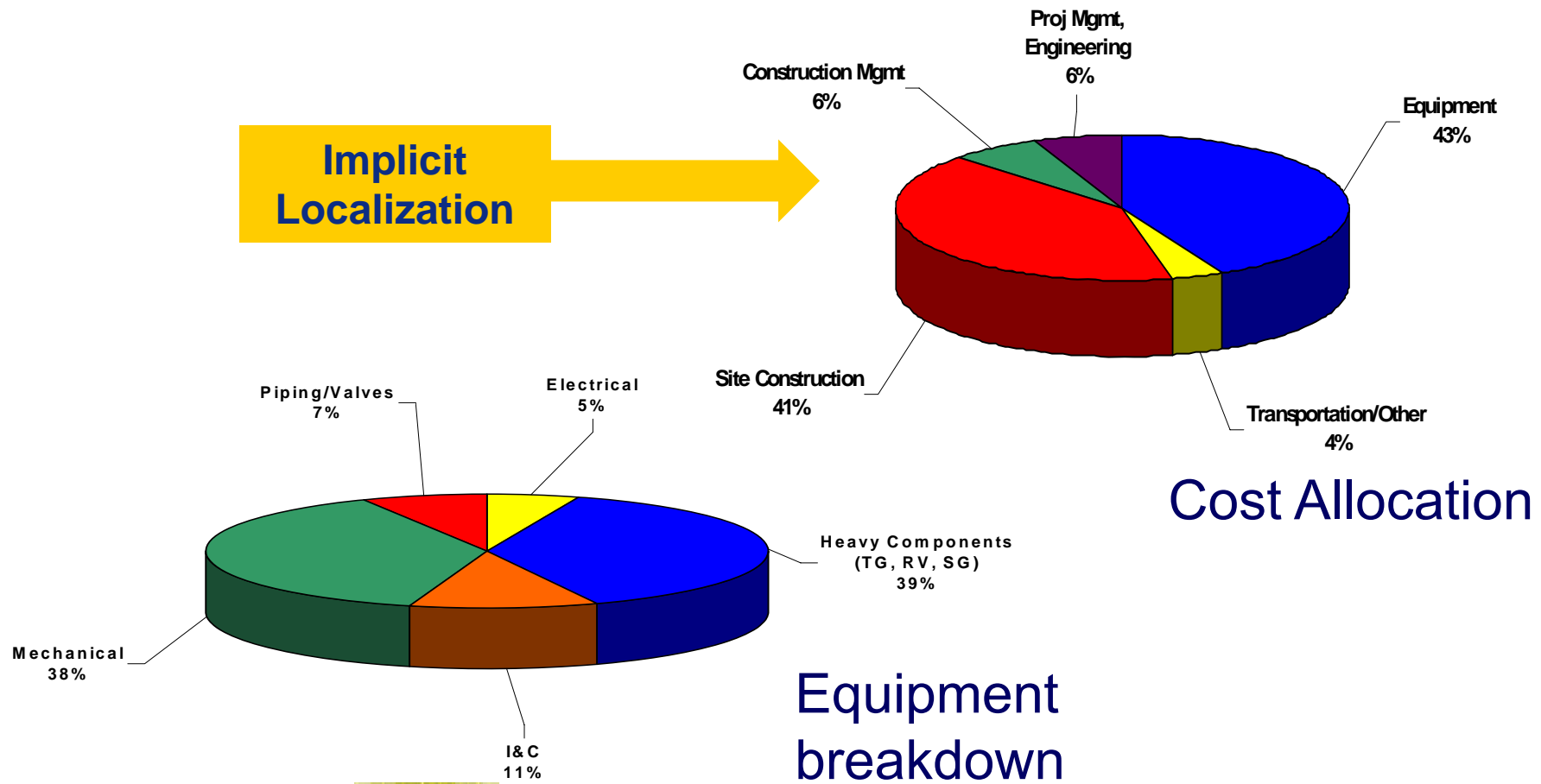
This experience provides an invaluable understanding of Czech capabilities and forms the foundation for today's potential supply base

Westinghouse is Committed to Czech Industry

- ***Construction represents a large portion of any AP1000 project***
- ***For over 12 months, Westinghouse has been engaged in an extensive in-country process of evaluating Czech constructors***
- ***Westinghouse is conducting extensive on-site investigations and qualification reviews to evaluate Czech constructors***

This process is on-going

Typical AP1000 Cost Allocation By type and equipment breakdown



Examples of equipment required

(Qty per reactor unit)

Category	Safety-related	Non-safety
Valves	700	4700
Pumps (non-RCP)	0	45
Tanks	3	42
Heat Exchangers	1	30

Fewer Nuclear grade (Safety-related) components provides more diversity within supply base

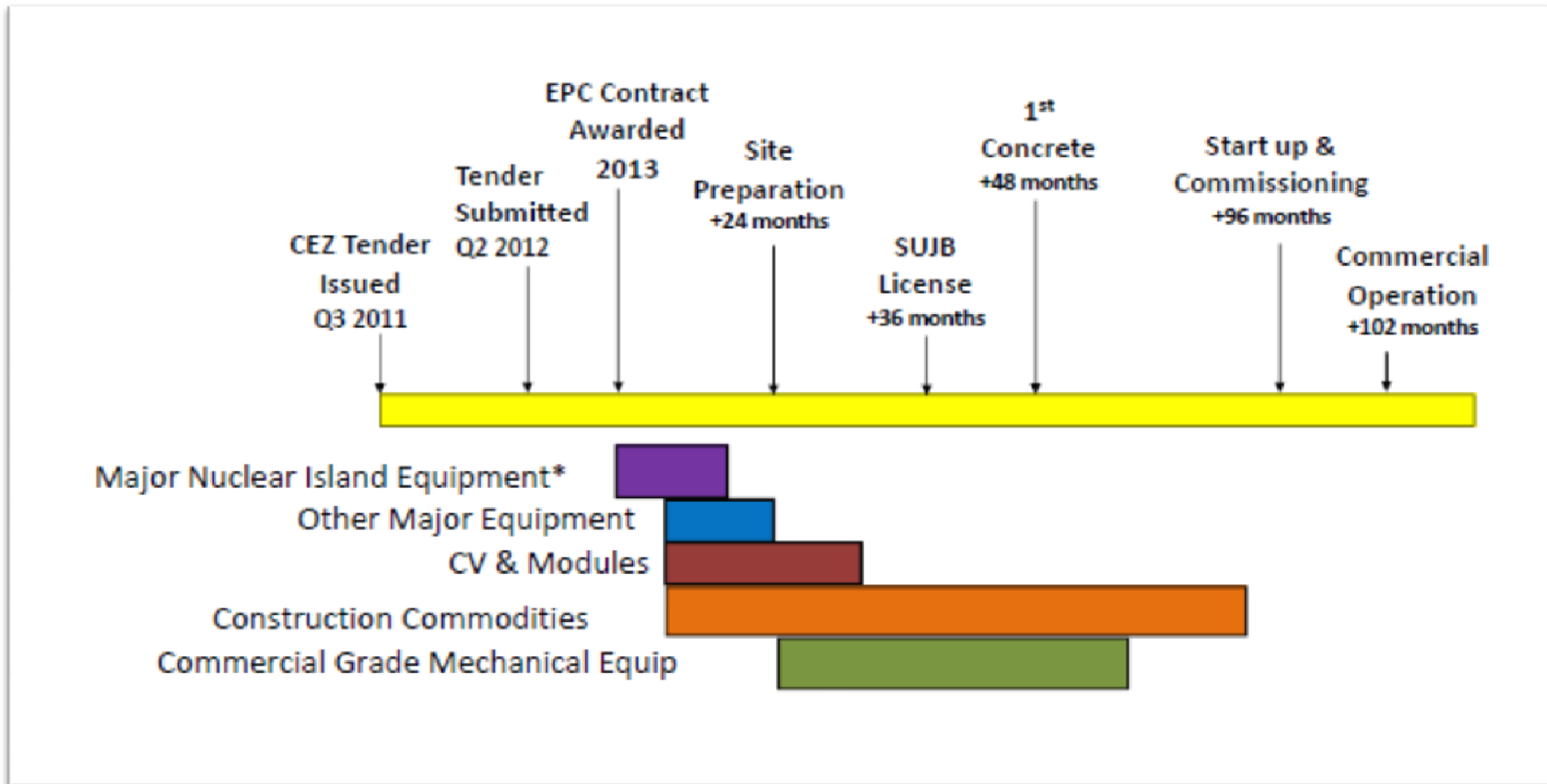
AP1000 Localization Opportunities

- NSSS & BOP Valves:
- Pumps & Compressors
- Heat Exchangers & Condensers
- Tanks & Accumulators
- Switchgear, MCCs, Panels
- Forgings
- NSSS Piping
- BOP Piping
- Cable
- Cable Tray
- Metallic Conduit
- HVAC Duct
- Air Handling Units, HVAC Fans
- Batteries
- Instruments
- Modules
- Concrete
- Rebar
- Formwork
- Structural Steel

Most Equipment and Commodities are non-safety class

Potential Scenario for Temelin

Timeline of Purchase Order Placement



SCM Portal –

<https://supply.westinghousenuclear.com>

Westinghouse

Username:
Password:

User Summary

If you have already received a username and password for our Supplier Website, log in at the top right of this page.

Links

- Contact Us
- Become a Supplier
- Westinghouse
- Dun & Bradstreet
- U.S. NRC
- ISO
- ASME

Welcome to the Westinghouse Supplier Website

The Nuclear Renaissance Starts Here.™

Do you want to become a supplier to Westinghouse Electric Company? [Click Here](#)

If you have already received a username and password for our Supplier Website, log in at the top right of this page.

Become a part of the growing nuclear industry:

- Worldwide electricity demand is expected to double by the year 2030.
- The International Atomic Energy Agency is projecting an increase of 99 - 311 new nuclear power plants worldwide by 2030.
- During 2009, there were 438 nuclear reactors that produced 13.8% of the total electricity produced worldwide.
- There are currently 60 nuclear power plants under construction in 16 countries.

Westinghouse technology:

- Nearly 50% of the nuclear power plants worldwide are based on Westinghouse technology.
- Westinghouse's AP1000™ nuclear power plant is the only US Nuclear Regulatory Commission certified Generation III+ plant.
- China is currently building four AP1000s, with the first power plant projected to be operational in 2013.
- Many US utilities already have selected the AP1000 as their technology of choice.
- Visit the AP1000 Website (www.ap1000.westinghousenuclear.com) for additional information.

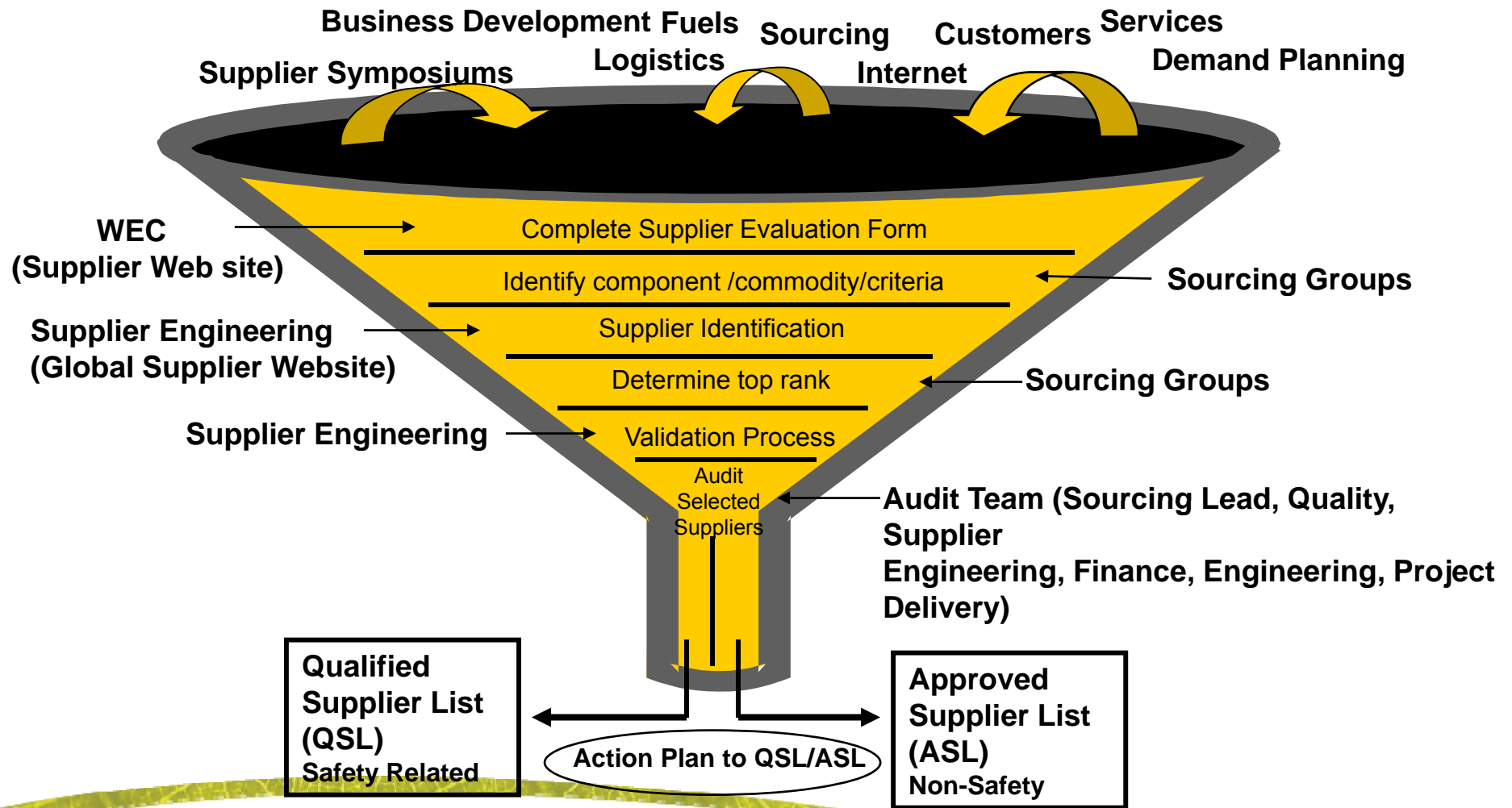
Westinghouse Electric Company (www.westinghousenuclear.com) is comprised of four product lines:

- Nuclear Power Plants:** Offers new plant designs, licensing, engineering and component design and procurement.
- Nuclear Services:** Offers products and services to help keep both Pressurized Water Reactor (PWR) and Boiling Water Reactor (BWR) nuclear power plants operating safely and competitively worldwide.
- Nuclear Fuel:** Offers single-source fuel for Pressurized Water Reactor, Boiling Water Reactors, VVER, advanced gas-cooled reactors (AGR), and Magnox reactors.
- Nuclear Automation:** Offers full-scope maintenance, enhancements and upgrade strategies specific to each plant's long-term needs for nuclear power plant control and safety systems.

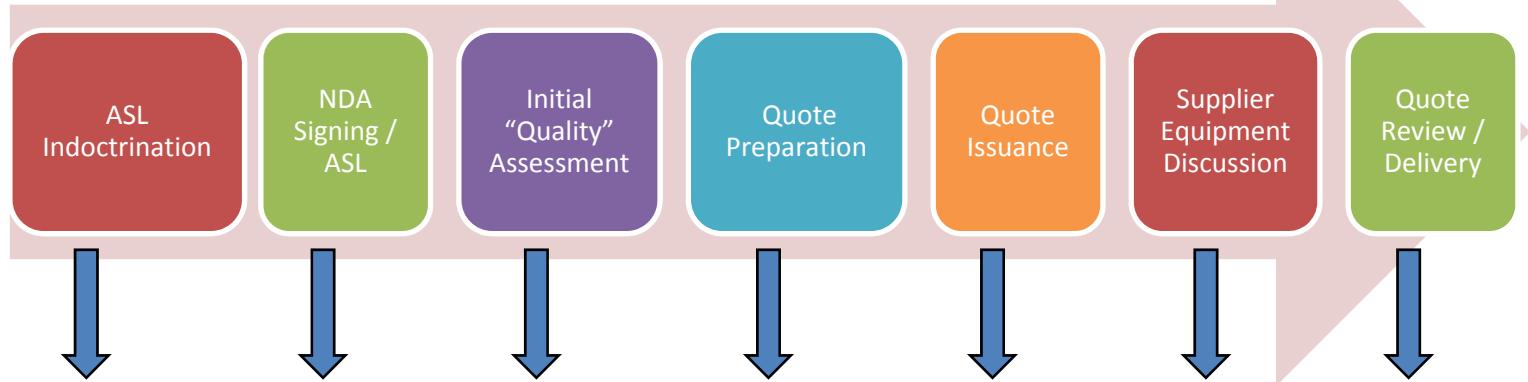
Westinghouse is positioned to lead the nuclear renaissance and desires suppliers who are equally committed to providing clean, safe and reliable energy.

AP1000™ and the phrase, "The Nuclear Renaissance Starts Here.™" are trademarks of Westinghouse Electric Company LLC

Supplier Identification Processes



Supply Evaluation Process



Task Owner

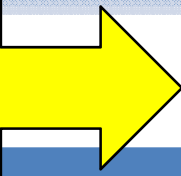
ASL / Supply Development (SD)	ASL / SD / Supplier	ASL / Quality	Sourcing	Sourcing	Sourcing / SD	Sourcing, Engineering and Quality
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Inputs / Outputs

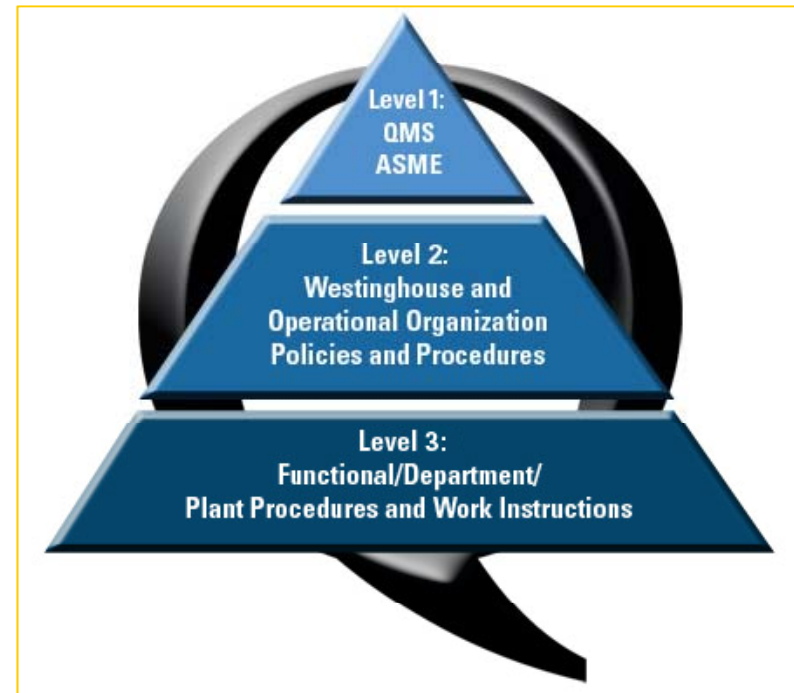
- Website - Supplier Sympos - Supplier Visits/VOC	- Supplier Register - Signed NDA - Sourcing Alignment	- Desk Top Audit - Quality Review - Audit	- Generic T&C - Quote Package - Response Date - Etc.	- Via E-room	- Meetings - Phone Calls - Visits - Knowledge Sharing	- VACPIC Input - VACPIC Output to Pricing
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- Process Drivers**
- Gaps
 - Capacity
 - Sole Source
 - Supplier Performance
 - Localization
 - FOAK
 - Strategic, MOU
 - Cost Reduction

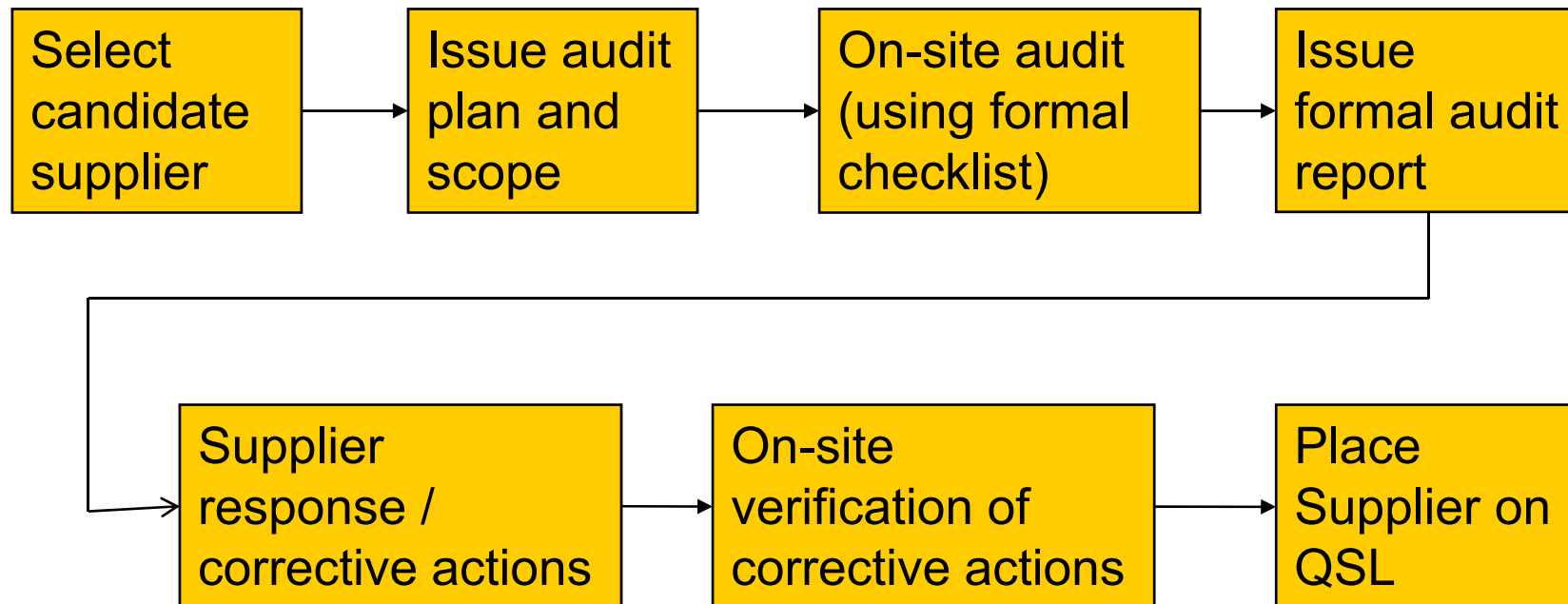


AP1000 Quality Assurance Program

- Westinghouse QMS meets:
 - 10CFR50 App. B (USNRC)
 - NQA-1, 1994 Edition
 - ISO-9001
- Referenced in AP1000 Design Certification
- Basis for current Westinghouse supply globally



Supplier Qualification Audit Process



Westinghouse is Committed to Czech Industry

Westinghouse will continue to develop Czech suppliers throughout the tender process.

Commercial, “off-the-shelf,” non-safety components provide large opportunity for localization of AP1000 scope:

- *More non-safety class equipment inherent in the design*
- *Construction commodities*
- *All will be investigated later in the process as tender release approaches and sub contractor scopes are identified*

Potential commodity and non-safety commercial equipment suppliers will be evaluated consistent with the timescale of the tender

Summary

- ***Westinghouse projects are on-going and on-schedule in China and the United States***
- ***AP1000's reduction of risk directly supports the three pillars of the nuclear renaissance***
- ***AP1000's simplified design means less safety-related equipment and greater ability to localize content***
- ***Westinghouse has a successful 20-year history in Czech Republic***
- ***Strong engagement and extensive work ongoing in Czech Republic with major equipment suppliers and constructors***

First AP1000 in the World:

Thank you!



On Schedule for 2013.