Nuclear Energy Systems Business Operation

June 3, 2010

Akira Sawa
Director, Executive Vice President,
General Manager,
Nuclear Energy Systems Headquarters

MITSUBISHI HEAVY INDUSTRIES, LTD.

Contents

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

1. Highlights in Corporate News, 2009-2010

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Projects Delivered

The latest PWR power plant started commercial operation

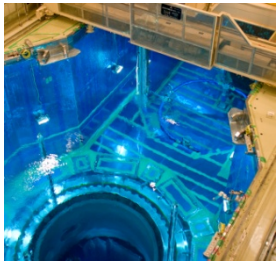
Hokkaido Electric
Tomari unit 3
(Dec 2009)

Tomari unit 3 (right)

Inheriting plant technologies

1st plutonium thermal operation started in Japan

Kyushu Electric
Genkai unit 3
(Dec 2009)
Shikoku Electric
Ikata unit 3
(Mar 2010)



Genkai No. 3 reactor MOX fuel loaded

Nuclear Fuel Cycle Advanced

Realizing Major Projects

3rd US-APWR selected

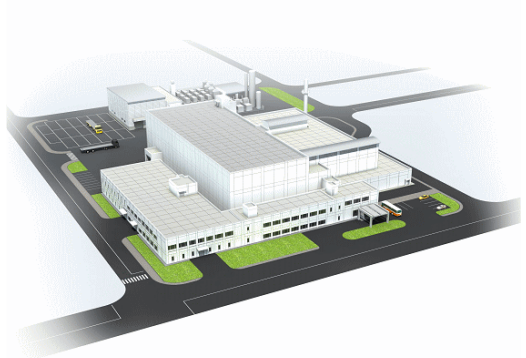
Dominion Resources
North Anna unit 3
(May 2010)

Existing North Anna unit 1/2

Plant export starts in earnest

Large-scale order received for nuclear fuel cycle

Japan Nuclear Fuel Limited
Rokkasho MOX fuel fabrication plant
(June 2009)



Rokkasho MOX fuel fabrication plant (J-MOX)

Contribution to Japanese nuclear fuel cycle

2. Results of the 2008 Business Plan

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Orders, Sales and Profit

Steady business mostly in domestic maintenance services,
nuclear fuel cycle and components export

Major Actions and Achievements

Steady business promotion and construction of business foundation
towards global deployment

Overseas business	○Dominion selected US-APWR, a 1,700MWe class large-sized PWR, the third unit following the 2 units selected by Luminant. ○The basic design of ATMEA1, a 1,100 MWe class mid-sized PWR, completed. Now being promoted to Jordan and other countries.
Domestic business	○Sales for maintenance services expanded mainly because of earthquake proofing works and preventive maintenance services to improve plant capacity factor. ○Hokkaido Electric Tomari unit 3 started commercial operation. Steady progress in Tsuruga units 3&4 and Sendai unit 3 projects. ○Leading role for Mox fuel usage in LWRs, J-MOX and FBR in the field of nuclear fuel cycle
Business bases	○Strengthening alliance and management of affiliate companies: MNES in the US, ATMEA, a joint venture between MHI and AREVA in France, and MFBR dedicated in development of FBR technology in Japan, reorganization of MNF for complete fuel supplier and establishment of MNEC by unifying domestic engineering subsidiaries ○Now prepared for 2 plant orders annually by securing the necessary human resources and reinforced production facilities

LWR: Light Water Reactor; MNES: Mitsubishi Nuclear Energy Systems, Inc.; ATMEA: A joint venture with AREVA;
MFBR: Mitsubishi FBR Systems, Inc.; MNF: Mitsubishi Nuclear Fuel Co., Ltd.; MNEC: MHI Nuclear Engineering Co., Ltd.

3. Overview of the 2010 Business Plan

Business Environment, Vision and Strategy of the 2010 Business Plan

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Business Environment

- Expanding nuclear power plant market both in industrialized and developing countries
- Promotion of nuclear power introduction in Japan toward reduction of CO_2 emissions by 25%
- Acceleration of nuclear fuel cycle for stable LWR operation and energy security

Vision

A Leading Company in the Global Nuclear Energy Field
～ Sophisticated Production Capabilities Contribute to Low-Carbon Society ～

Business Strategy		Value Chain Innovation
Overseas business	Changing business model from component export to plant export	■ Process innovation - Introduction of strategic ICT - ■ Production innovation - Strengthen manufacturing capability toward supplying 2 units per annum - ■ Supply chain management - Construction of global SCM -
Domestic LWR business	Strongly promoting preventive maintenance services for existing units and construction of new APWRs	
Nuclear fuel cycle business	Deploying solution business in nuclear fuel cycle and leading FBR development as a core company	

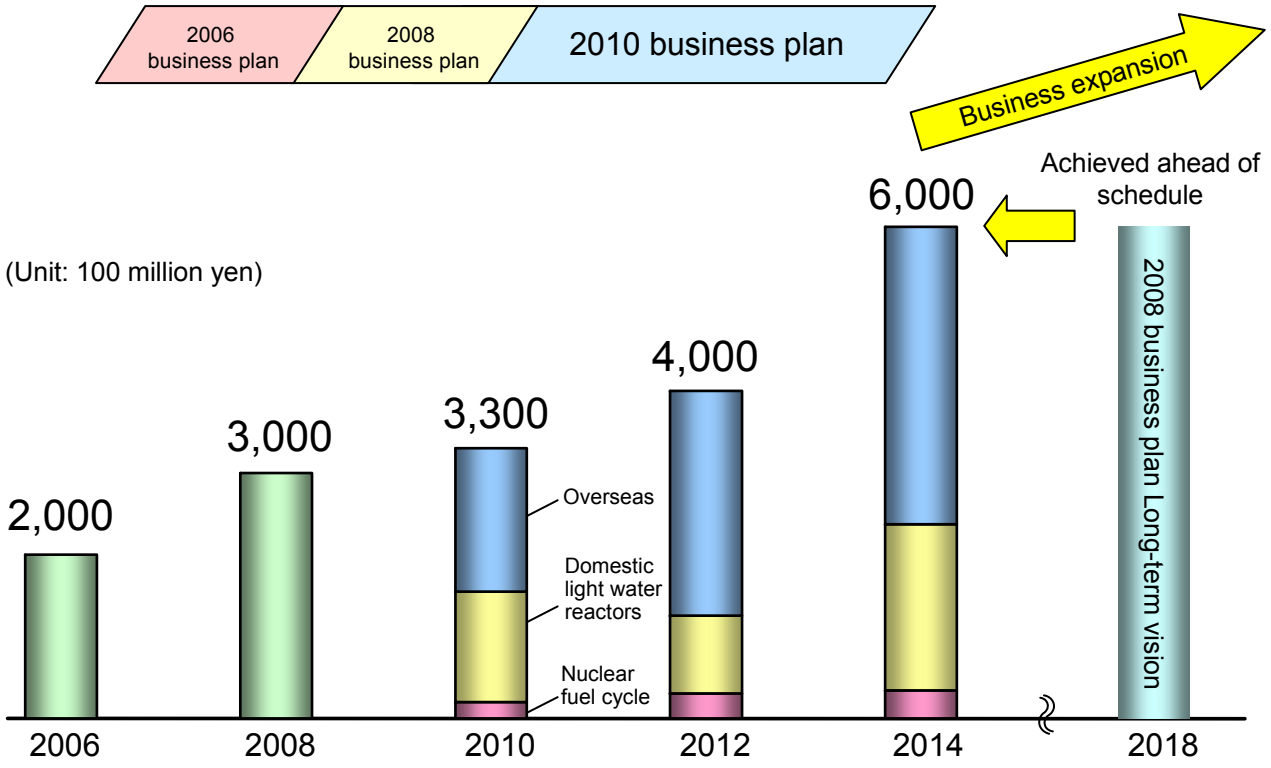
APWR: 1,500 MWe class advanced pressurized water reactor　FBR: fast breeder reactor　ICT: Information Communication Technology

Numeric Targets of the 2010 Business Plan

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

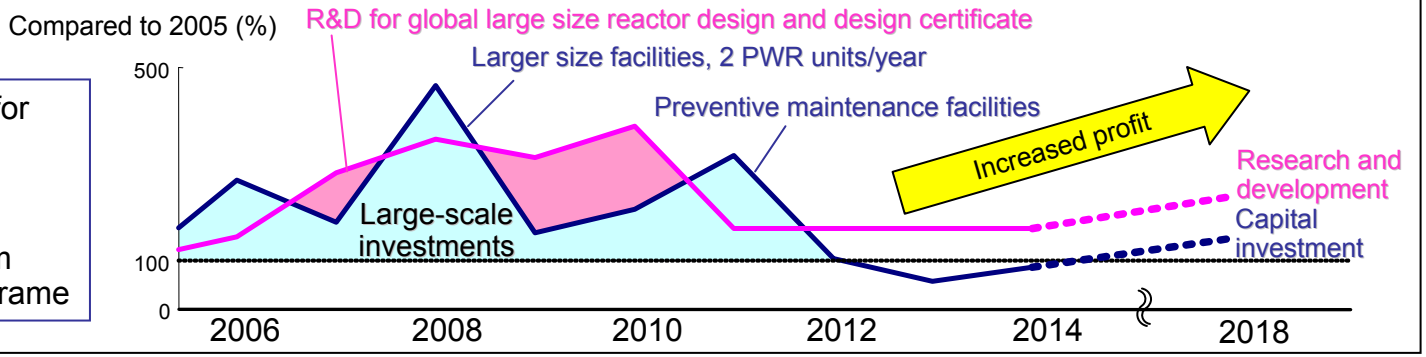
Business size

- The target of 600 billion Japanese yen in the long-term vision to be achieved ahead of schedule, in 2014.
- Percentage of overseas sales to grow to the 60% range



Resources

- Large-scale investments for global development were completed in the 2008 business plan.
- Profit to be increased from 2010 Business Plan timeframe



4. Operation in Global Business

- Changing the business model from component export to plant export

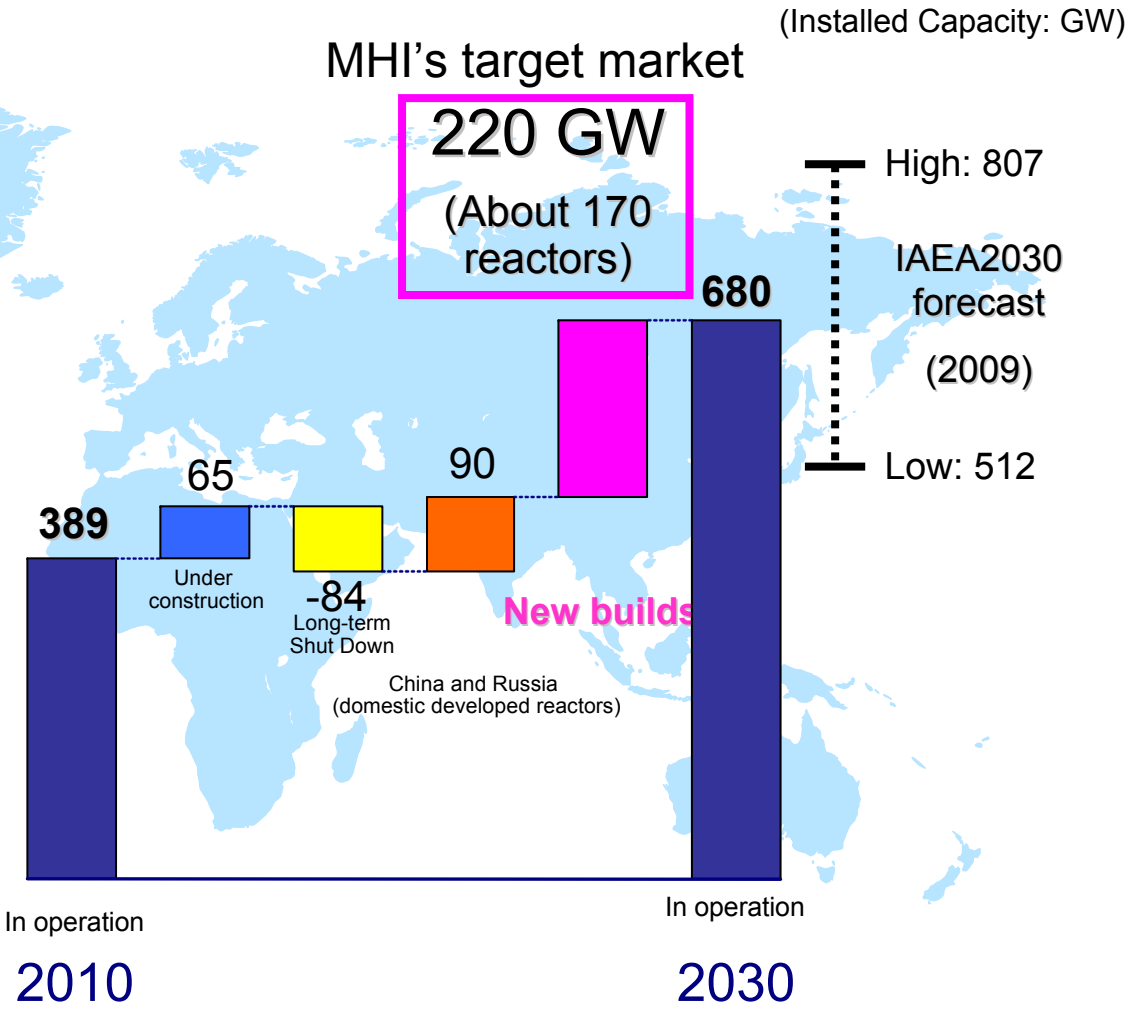
Market Volume for New Build Projects

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Global expansion to reduce CO_2 emissions and strengthen energy security

- Installed nuclear capacity to grow by a factor of 1.7 (2010→2030)
- MHI's target market 220GW (about 170 reactors)

(Note) Excluding China and Russia



Calculated by MHI based on JAPAN ATOMIC INDUSTRIAL FORUM, INC. (JAIF) "Trends in the World's Nuclear Power Development, FY 2010 Edition" and IAEA "Energy, Electricity and Nuclear Power Estimates for the Period up to 2030 2009 edition"

Market Characteristics and Our Strategy

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

	Industrialized countries market	Developing countries market
Systems of laws and regulations	- Already established	- Under establishment
Bilateral treaty	- Already signed with major countries (US, UK, France, Canada, Australia, China and EURATOM)	- Need to be signed
Operating capabilities	- Experienced operators	- Operators to be trained because of little operations experience
Scope of supply	- Limited to plant construction	- Operation, maintenance and front-end included in many cases
MHI's strategy	MHI-centered business development - Export of MHI's strategic nuclear reactors for global market - Financial support to be necessary (JBIC, NEXI, etc.)	Promotion based on a public-private sector partnership model - Government: Support through the development of laws and regulations and financing - Electric power companies: support for operation and maintenance - MHI (manufacturer): Export of plants

Key Markets for New Plants and MHI's Actions

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Acquiring more than 20% of the global market (two unit orders per annum)

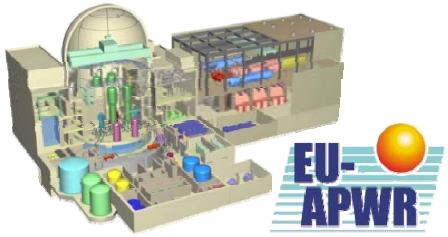
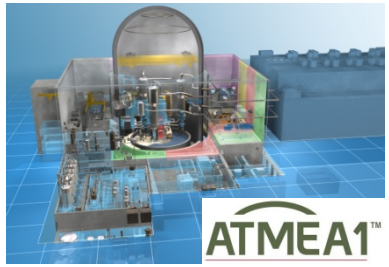
	North, Central and South America	Europe and Middle East	Japan and Asia
Strategic reactors	US-APWR ATMEA1™	EU-APWR ATMEA1™	APWR (Including the improved Tomari unit 3 type) ATMEA1™
Industrialized countries market	United States Further orders pursued for US-APWR followed by selection of US-APWR by Luminant (Commanche Peak units 3&4) and Dominion (North Anna unit 3)	Europe Aggressive sales activity for Finland and other countries	Japan Steady progress in Tsuruga units 3&4 and Sendai unit 3 projects
Developing countries market	Marketing expanded with market needs in Central and South America	Jordan Currently working with ATMEA with support from the Japanese and French governments	Vietnam Approaching with the "All Japan" fleet India Taking steps in this promising market with government support

(Note) The share is based on reactors in operation or in development between 2010 and 2030, excluding China and Russia.

Global Lineup of Strategic Nuclear Reactors

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Meeting the market needs around the world with different types of reactors

Reactor type			
Output	1,700 MWe class PWR (Large reactor: 60 Hz)	1,700 MWe class PWR (Large reactor: 50 Hz)	1,100 MWe class PWR (Intermediate reactor: 60 Hz/50 Hz)
Thermal output	■ 4,451 MWth	■ Same as left	■ 3,150 MWth
Concept	■ Developed for the United States on the basis of APWR	■ Developed for Europe on the basis of APWR	■ Developed for all of the world by combining technologies of MHI and Areva
Safety	■ Full four train ■ Meeting the requirements of U.S. severe accidents	■ Same as left ■ Meeting the requirements of European severe accidents	■ Full three train ■ Same as at left
	■ Protection against aircraft collision	■ Hybrid-type safety system (high-performance pressure-charged tank)	
Operation *	■ 24-month operation	■ Load following function	■ Ability to use MOX

* Depending on requirements by country, region, and electric power company

Selection of US-APWR for North Anna Unit 3 by Dominion Resources

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

US-APWR selected from several candidate reactor types (May 2010)
-Third US-APWR selection following Comanche Peak unit 3&4 of Luminant-

Critical points led to customer's decision

- Proven safety, reliability and high technology
  - Experience with 24 reactors with PWR full turnkey construction in Japan
  - Achievements in delivering major components to Dominion Resources for Surry unit 2, North Anna unit 1, Millstone unit 2 and Kewaunee

Existing North Anna units 1&2

Formation for construction project in the U.S

- EPC alliance with U.S. partners such as URS

Dominion Resources

One of the largest electricity suppliers in the United States

Output capacity at owned facilities: 27 GW, 5.8 GW of which is generated by nuclear power with seven reactors (No. 3 in the United States)

- Sales (2009): 15.1 billion dollars
- Number of employees: about 18,000
- Headquarters: Richmond, Virginia

URS Corporation

One of the world's major engineering companies, providing design, construction management, and other services in more than 30 countries

No. 2 in the US Top 500 Design Firms (ENR Magazine, April 2010)

- Sales (2009): 9.25 billion dollars
- Number of employees: about 45,000
- Headquarters: San Francisco, California

US-APWR: 1,700 MWe class APWR for the U.S. market

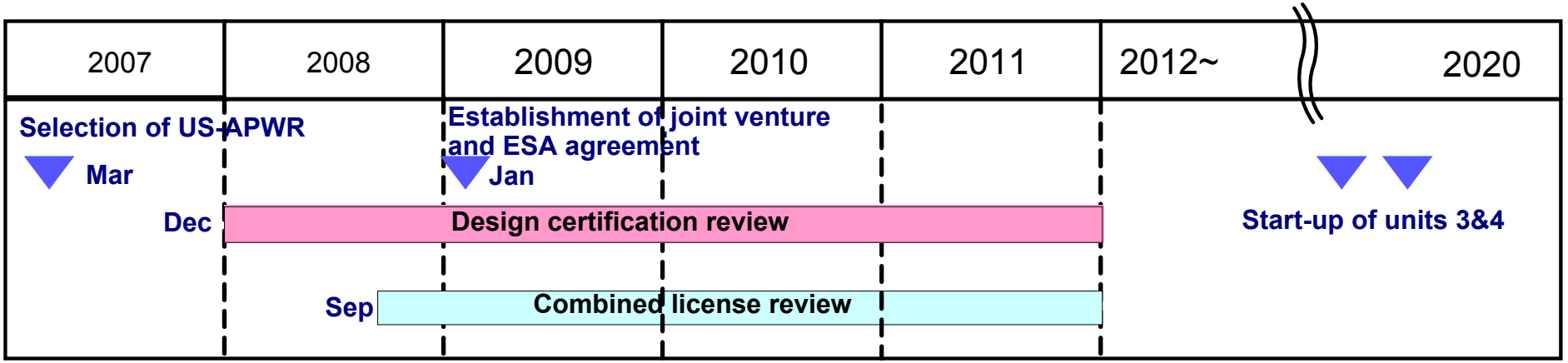
Progress at Comanche Peak Units 3&4 of Luminant Generation

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Steady progress toward plant construction

- ESA agreement signed in 2009; detail design work ongoing for accurate cost estimates
- Supporting Luminant Generation for application for DOE's loan guarantee, as the budget for DOE financing expected to be expanded from 18.5 billion dollars to 54.5 billion dollars
- Accelerating design certification and combined licensing processes by DCWG (Design Centered Working Group) consisting of Luminant, Dominion, and MHI

Artist's rendition of Comanche Peak units 3&4



ESA: engineering service agreement DOE: U.S. Department of Energy DC: design certification COL: combined license for construction and operation

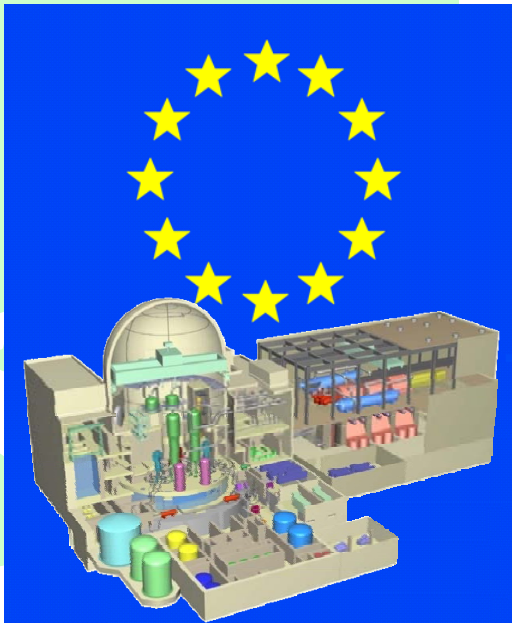
Market Developments for EU-APWR

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Participation in the large-sized reactor market in Europe

- The Finnish government selected TVO as one of the two electric power companies for the potential construction projects.
  (TVO selected EU-APWR as one of the candidate reactor types.)
- Sales promotion in Switzerland, Sweden, the United Kingdom and others countries.
- Applied for conformity review of European Utility Requirements (EUR)
  (Responding to requirements particular to Europe, such as responses to serious accidents)
- Signed strategic partnership agreements with IBERDROLA Ingenieria Y Construccion of Spain and Weir of the United Kingdom
- Preparing to establish an European base

EU-APWR



EU-APWR: 1,700 MWe class APWR for Europe

Sales Promotion for ATMEA1

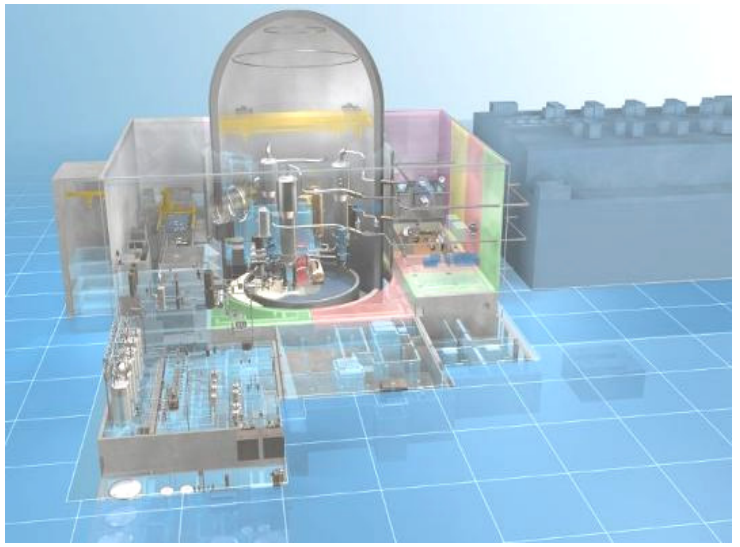
MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Actively promoting in the global mid-sized reactor market

- Responding to the Jordan project with support from the Japanese and French governments
- Currently marketing ATMEA1 to potential customers in more than ten countries in the Middle East, Eastern Europe, Southeast Asia, Central and South America, and other areas
- Combining the world's top-level, proven technologies of MHI and AREVA
- The basic design completed. An application for a review of the safety options by the French Nuclear Safety to be scheduled.

MITSUBISHI HEAVY INDUSTRIES, LTD.
AREVA

ATMEA1™



ATMEA1™: 1,100 MWe class pressurized water reactor

Overseas Maintenance Business Initiatives

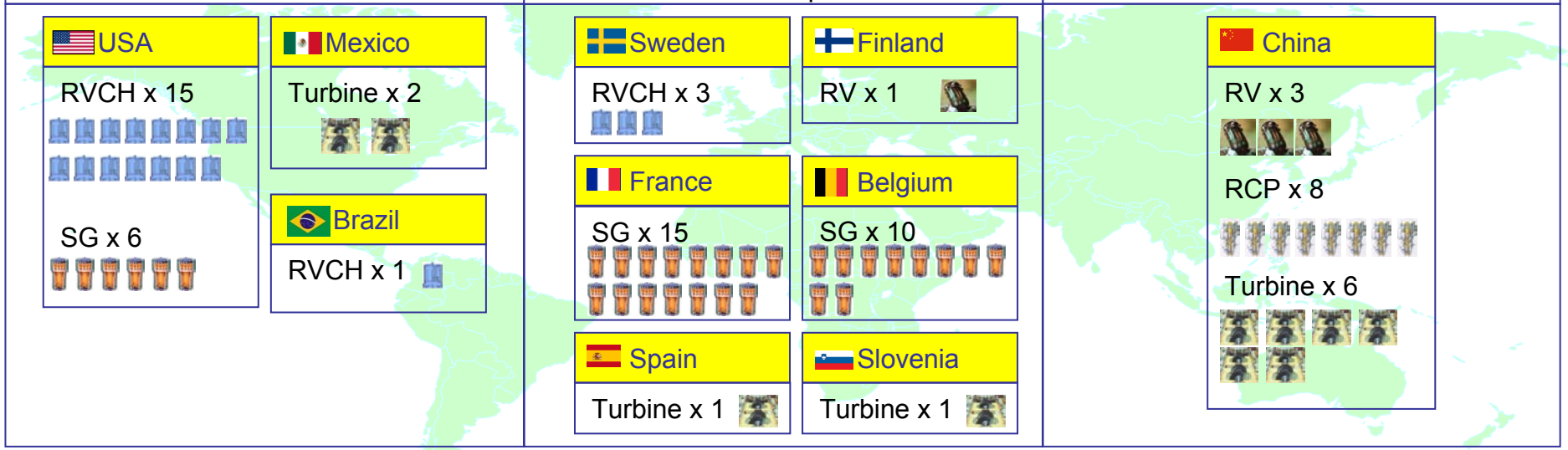
MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Boosting orders for overseas maintenance business as the Japanese NO.1 supplier of major heavy components for overseas market

- Organizing an overseas maintenance services network in alliances with local partners and by utilizing MHI's overseas factories
- Aiming to receive orders for components supply with installation and bolstering sales based on preventive maintenance technologies in Japan (advanced inlay, etc.)

● Regional strategies and major component orders (As of May 31, 2010)

North, Central and South America	Europe	Asia
● Sales to be expanded for preventive maintenance services in addition to component supply ● Cooperation with MNES (nuclear island) and MPSA (turbine island)	● Consecutive RSG orders received for EDF ● Strengthening alliances with European manufacturers (component supply and installation) ● Component supply for new EPR construction in Europe	● Expanding sales of turbines in collaboration with the Harbin Group ● Component supply for new EPR construction in Asia



RV: Reactor vessel RVCH: Replacement reactor vessel closure head SG: Steam generator RCP: Reactor Coolant Pump

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

5. Operations in Domestic Light Water Rectors Business

- Preventive maintenance activities
- The new build APWR construction

Maintenance Services in Japan

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Reduction in CO_2 emissions through preventative maintenance activities

Correlation between capacity factor and reduction in CO_2 emissions of PWRs in Japan

- 3.5 million tons of CO_2 emissions reduced by achieving availability factor of 85% (government target)

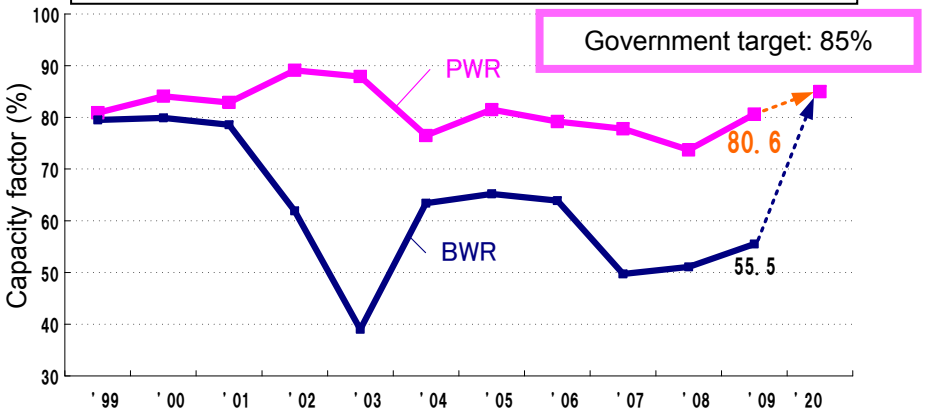
	2009 results	2020 target
Capacity factor	80.6%	85%
Annual power generation	136.7 billion kWh	185.7 billion kWh
Annual reduction in CO_2 emissions	2009 figure as the basis for comparison	**-3.5 million tons**

Steps to increase capacity factor

(1) Minimizing unscheduled shutdown by preventive maintenance activities
(2) Extended operation cycle

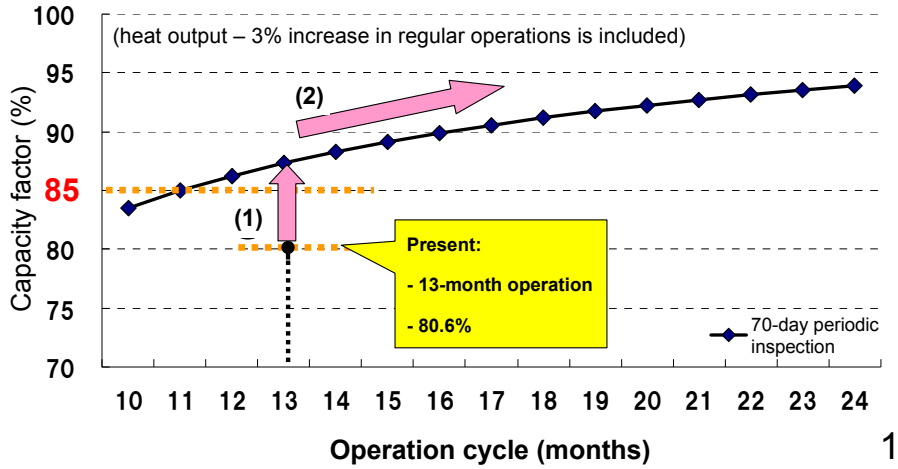
85% capacity factor achieved

Capacity factor trend in Japan



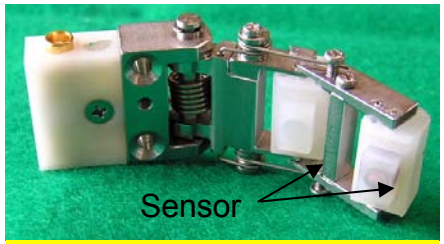
(Source: MHI's data based on the data published on the Denki Shimbun)

Relationship between capacity factor and operation cycle



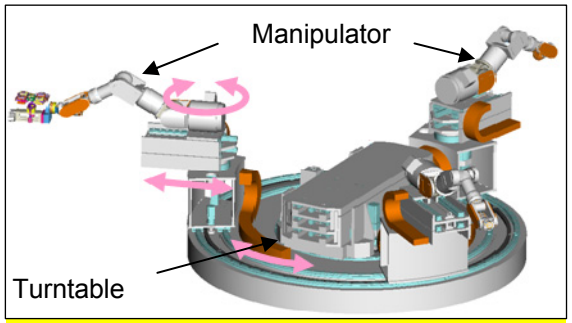
Technologies Supporting the Maintenance Services

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow



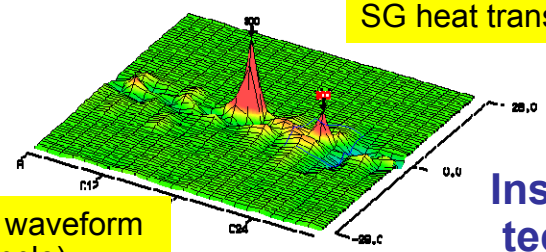
Special probe for weld ECT inspection

Inspection robot for SG heat transfer tube



Advanced INLAY system

Automated remote welding



ECT signal waveform (example)

Inspection technique

Repair technique

Stress improvement technique

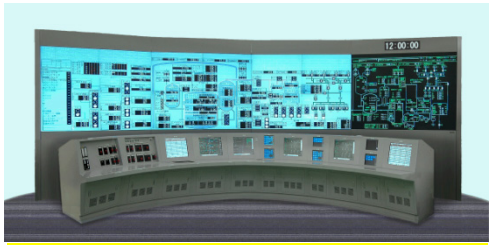
Heavy component replacement

Shot peening stress improvement

Water jet stress improvement

Reactor internal replacement work

Steam generator replacement work



Main control board replacement work

Preventive Maintenance Activities; Minimizing Unscheduled Shutdown with Advanced INLAY Device

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Automated preventive maintenance works for stress corrosion cracking on alloy 600 welding of inlet and outlet nozzles of reactor vessel

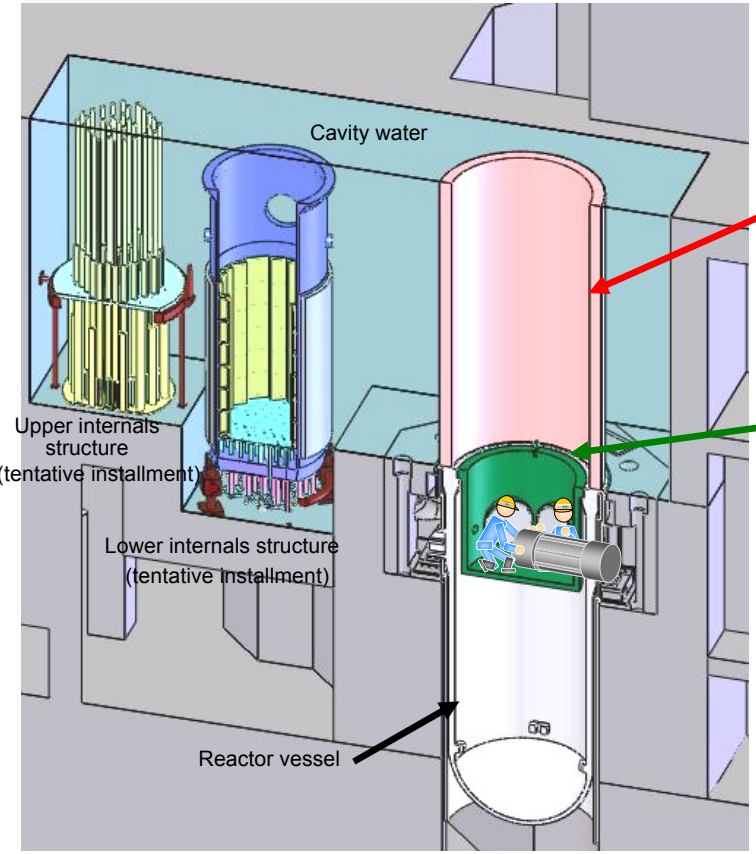
- **Reducing exposure dose and shortening work schedule by remote-controlled automatic and multiple concurrent works**

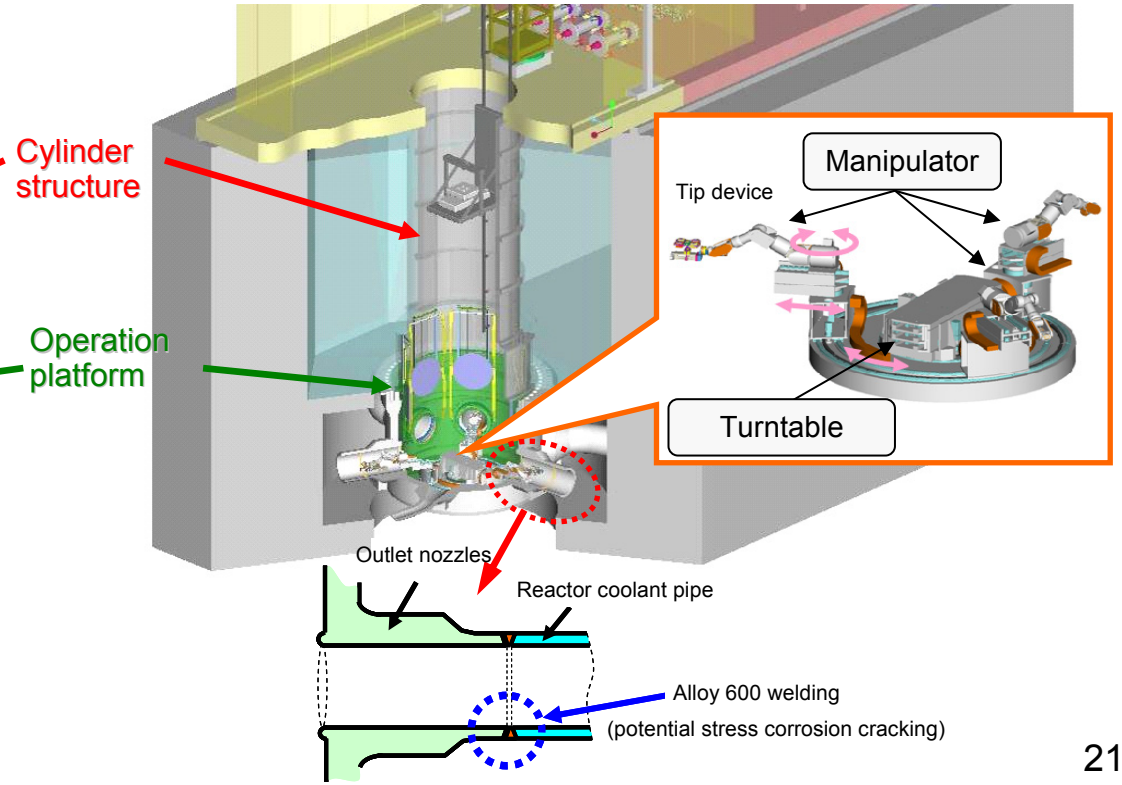
Existing method

- Installation, replacement and dismantling by operators in high radiation area

New method

- Significant exposure dose reduction by remote-controlled automatic overlay welding
- High-precision cutting, inspection, welding and maintenance by a variety of tip devices attached to manipulators (realizing shortened work schedule by multiple concurrent works)





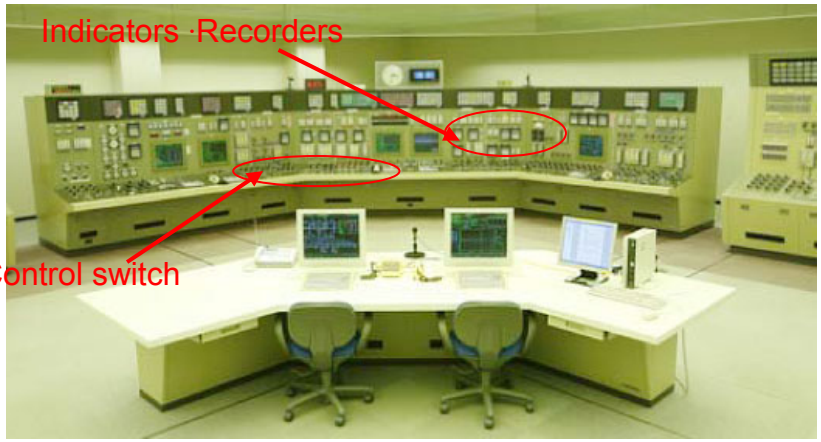
Preventive Maintenance Activities; Improving Operability by Advanced Digital Main Control Board

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Replacement with Advanced Digital Main Control Board

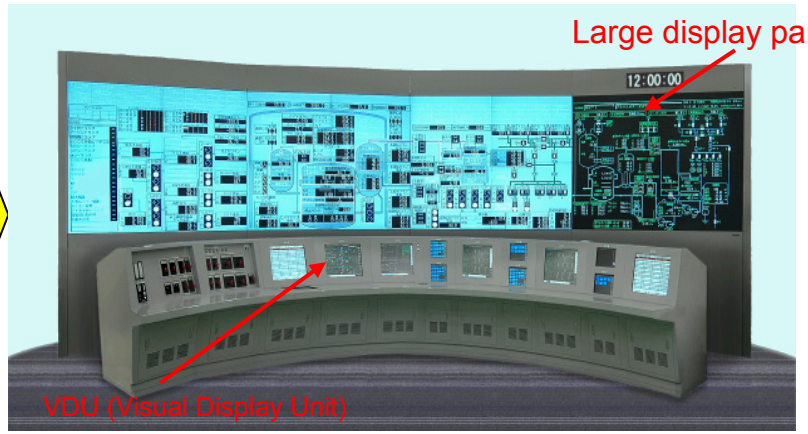
- Digital instrumentation and control (I&C) system applying computerized plant protection and control system with prompt response and high reliability
- Disconnecting and connecting Approx. 10,000 cables and replacement of 200 control panels in a short period

Conventional main control board



- Monitoring by indicators and recorders, plant operation by individual control switches (operators need to move around for monitoring and operation)

Advanced digital main control board



- Monitoring by large display panel and VDUs, plant operation by touch-panel on VDU screens (operators can be in a seated position for monitoring and control)
- Reducing the operator workload and improving operability

New build projects and MHI's Actions

Tsuruga units 3 and 4 and Sendai unit 3 proceeding
Active responding to plant replacement demand

Tsuruga unit 3 and 4

Revised seismic evaluation in establishment license application submitted

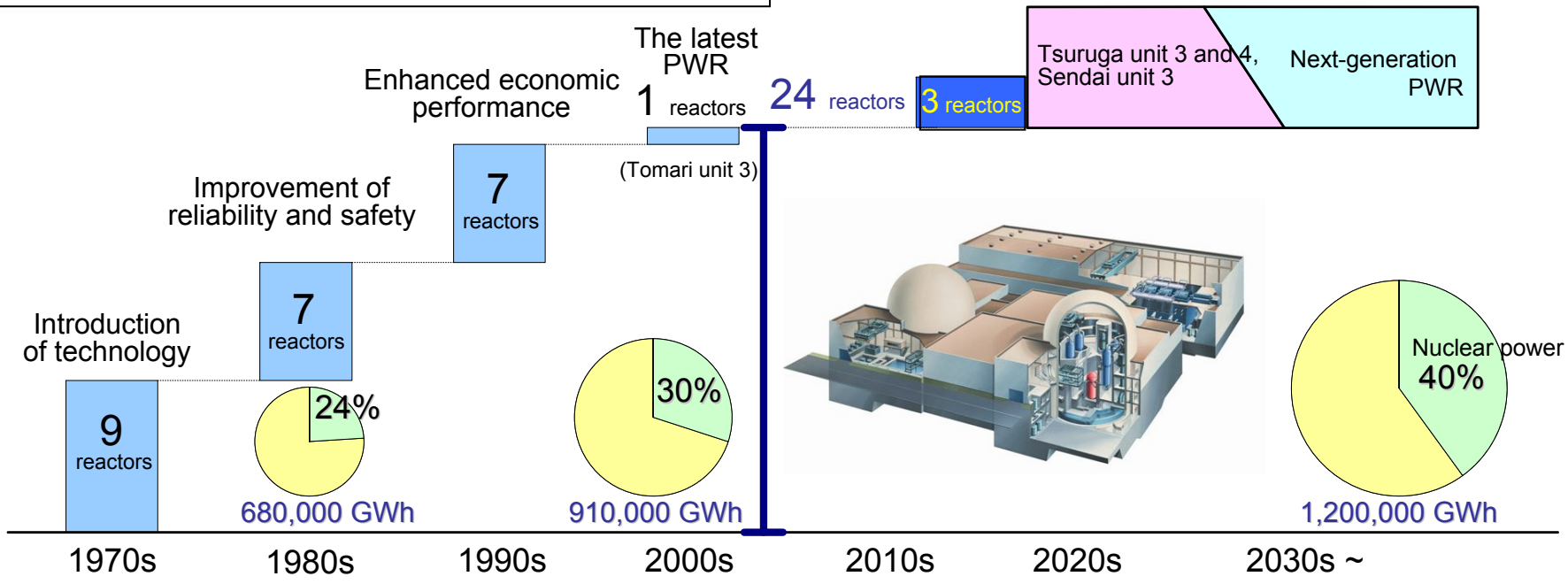
⇨ Safety review accelerated

Sendai 3

First public hearings finished

⇨ Preparation for establishment license application started

- Nuclear share of total electricity generation in Japan to be increased from 30% to the 40% range to reduce CO_2 emissions
- Development of next-generation PWR for plant replacement demand that is expected to arise from 2030



Next Generation PWR Development as a National Project

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Sophisticated 3S+3E Achievable Autonomic Type Plant

■ Targeting plant replacements in Japan from 2030 and the global market

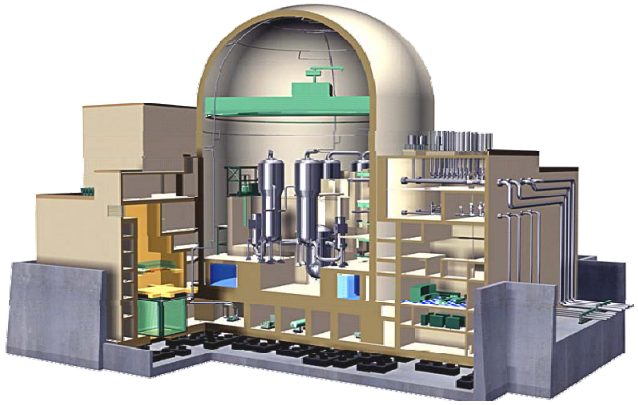
3S
Safety
Security
Safeguard

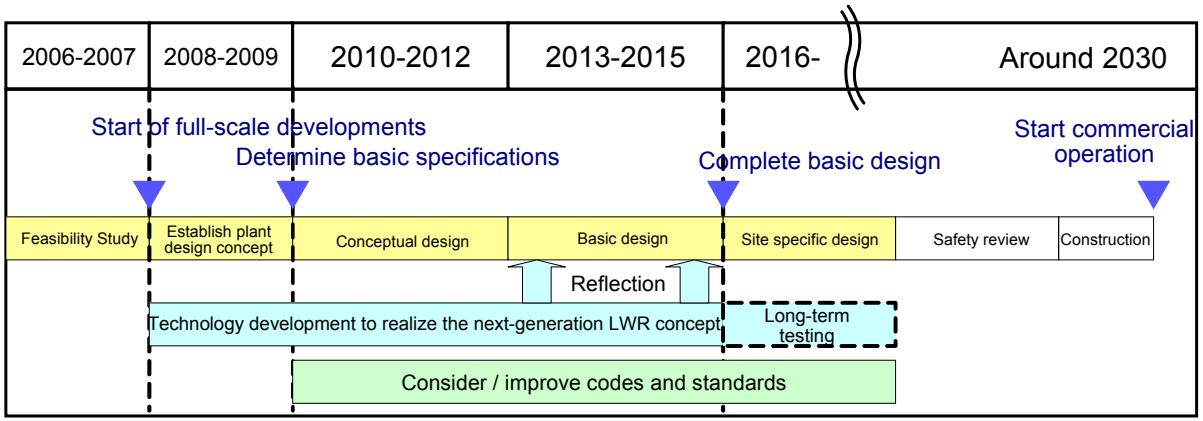
3E
Environment
Efficiency
Economy

Autonomic Type

No external support required in case of accident

(1) The world's highest efficiency
(2) Seismic isolation design as standard
(3) Short construction period
(4) Reduction of generation cost by long-life fuel and innovative core
(5) Advanced autonomous safe design
(6) Resistance to aircraft collisions, Tsunamis, etc.





6. Operation in nuclear fuel cycle business

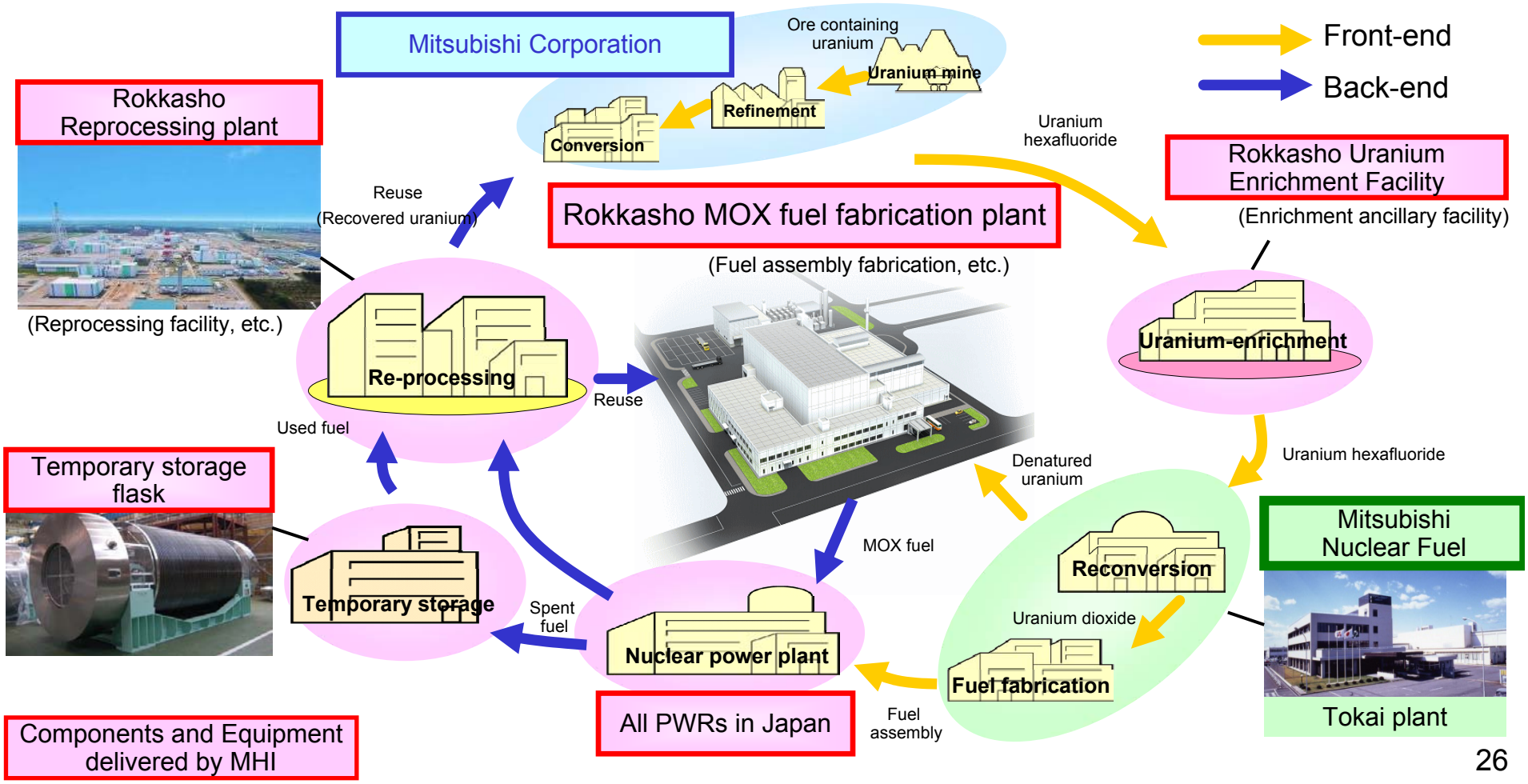
- Deploying the nuclear fuel cycle solution business
- Leading FBR development as a core company

Nuclear Fuel Cycle; Providing Total Solutions

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Participation in the entire process of the nuclear fuel cycle as the Mitsubishi Group

- Stable nuclear fuel supply by the Mitsubishi Group (MHI, Mitsubishi Corp. and Mitsubishi Nuclear Fuel)
- MHI delivered components and equipment for plants in front-end, power generation and back-end.

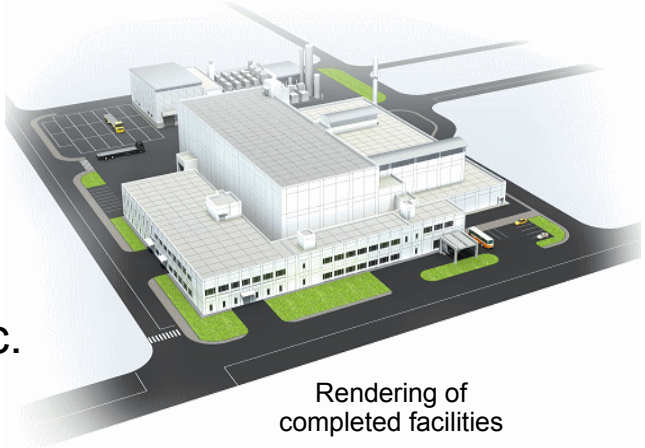


Order Received from Japan Nuclear Fuel Limited for Rokkasho MOX Fuel Fabrication Plant

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

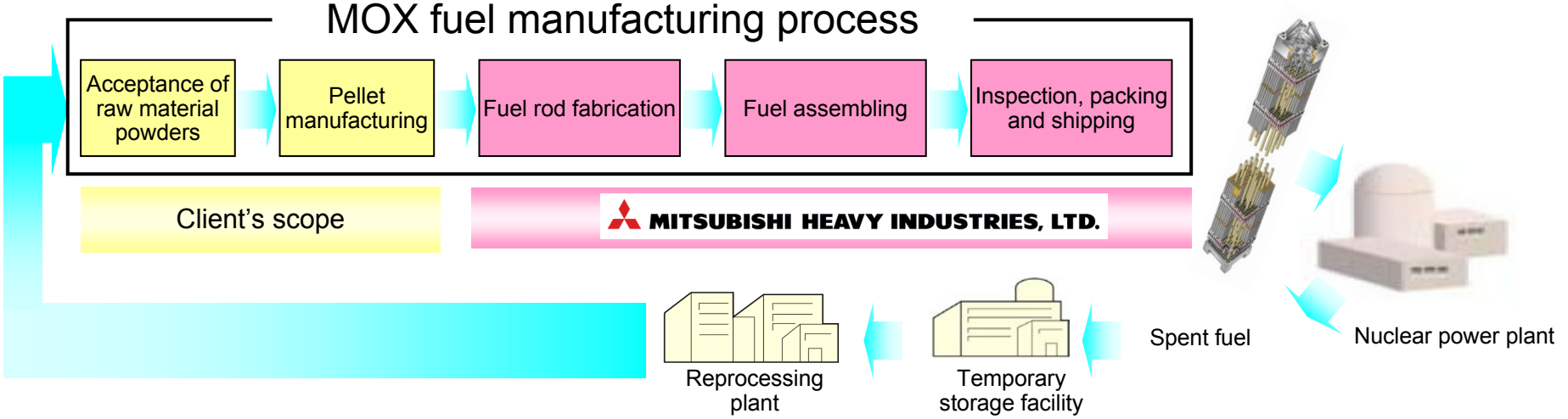
Executing Japan's first MOX fuel fabrication plant construction

- Product: MOX fuel assembly for domestic light-water reactors (PWR and BWR)
- Capacity: 130 t-HM*/ year
- Completion: March 2016 (scheduled)
- MHI's scope of supply:
  fuel rod fabrication facility, fuel assembling facility, etc.



Rendering of completed facilities

MOX fuel manufacturing process



* t-HM ((tons of heavy metal): a unit representing the total mass of metallic uranium and metallic plutonium

Leading FBR Development as Core Company

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Leading to the conceptual design completion by 2015 as a core company together with the government

- Establishing a plant that meets user needs
- MHI to be in charge of the construction of a large-scale sodium testing facility
- Verification of technology using MHI's own sodium testing facility

- Reflecting knowledge through PWR projects
- Enhancing safety and economic performance with innovative basic technologies
- Aiming to be the international de facto standard

2010 (May)
Restart up

FBR Monju (280,000 kWe)
Demonstration of power generation and establishment of sodium technology

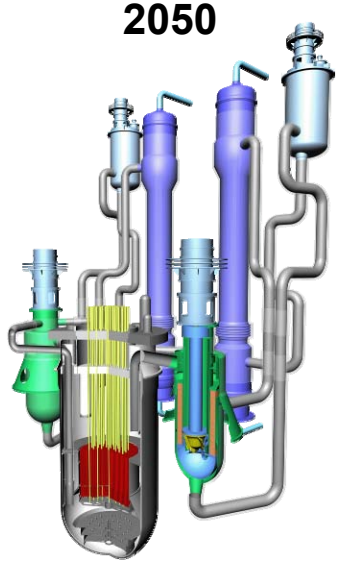
2015
Conceptual design completion

2025

Demonstration reactor (up to 750,000 kWe)
Demonstration of innovative technologies

Upgrading

2050



Commercial reactor (1.5 million kWe)
(Source: JAEA-Research 2006-042)

(Source：METI Nuclear Power Panel's third international strategy review subcommittee reference 2-2)

7. Value chain innovation

- Process innovation
  - Introducing strategic ICT
- Production innovation
  - Strengthening manufacturing capabilities
- Supply chain management
  - Constructing a global SCM

Process Innovation; Introducing Strategic ICT

ICT: Information & Communication Technology

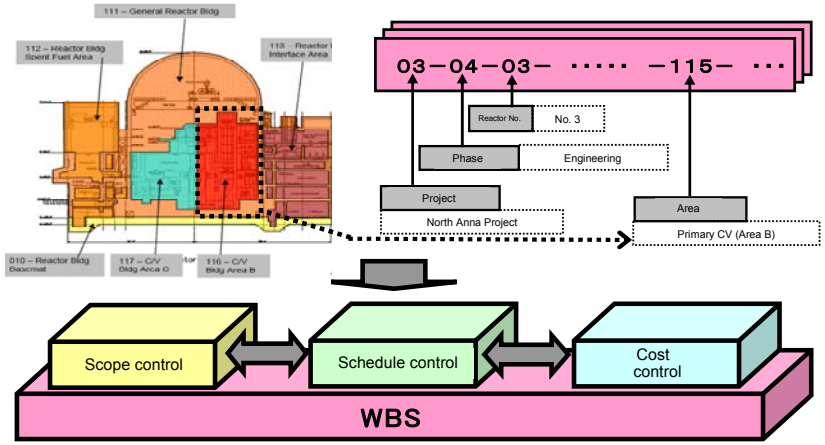
- Introducing strategic ICT to the execution of the large-scale FTK project for US-APWR
- Achieving sophisticated project management with the dual management of WBS (cost and schedule control) and CMIS (configuration management)

Comprehensive project management by standard plant WBS

Control of EPC execution by each WBS code

- Clarifying the division of responsibility within a consortium
- Flexible and highly precise management of processes and schedules
- Detailed management of budget/performance by EVM

■ Example of WBS code

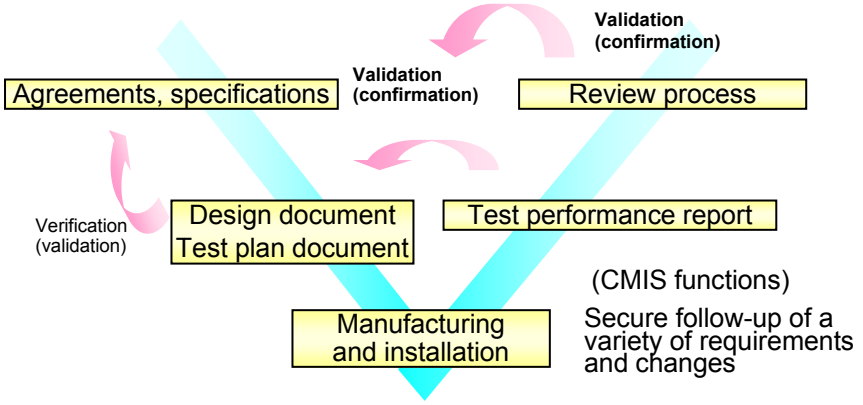


V&V management by CMIS

Verification of implementation of required specifications / quality assurance

- The content of NRC and customer requirements and approval applications to be properly reflected in design documents and plant facilities
- Secure reflection of changes in specifications, etc., and management of change information
- Use of facility database for customers' operation management

■ Concept of Verification & Validation process



WBS: Work Breakdown Structure (work breakdown chart) CMIS: Configuration Management Information System
EVM: Earned Value Management (a method of qualitatively measuring and analyzing project cost and schedules to manage them in an integrated manner)
NRC: United States Nuclear Regulatory Commission

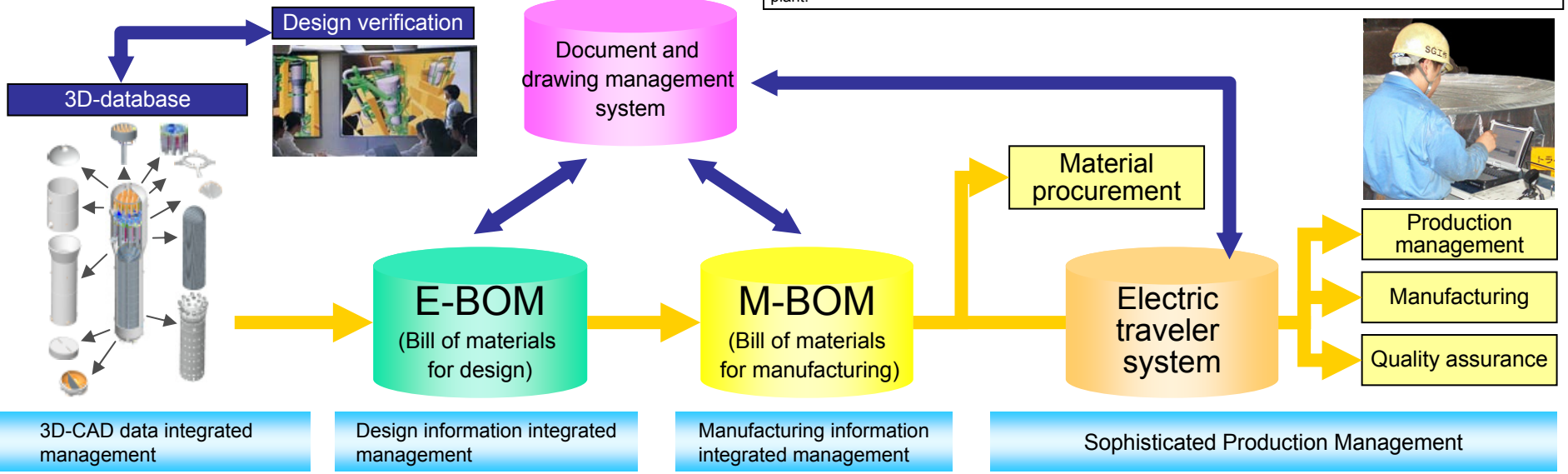
Production Innovation; Strengthening Manufacturing Capabilities

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

- Achieving highly efficient and high quality manufacturing through SPMS-based design and production innovation
  - 3D data are deployed in the BOM (component chart); information is integrally managed; operation process management is made more efficient.
  - Onsite documents are centrally managed by the electric traveler system; a higher level of production management is achieved.

Electric traveler system
Production management, manufacturing instructions, and quality assurance are conducted by electric work instructions that are integrally managed.
Real-time production management is possible as each operator can access the system via wireless LAN at the plant.

SPMS: strategic project management system BOM: Bill of Materials

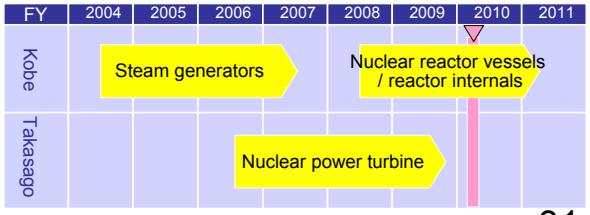


- Production system capable of making two plants a year to be launched in 2011

Steam generator plant, Kobe


Nuclear reactor vessel / reactor internal plant, Kobe (Futami)

Exclusive nuclear power turbine plant, Takasago

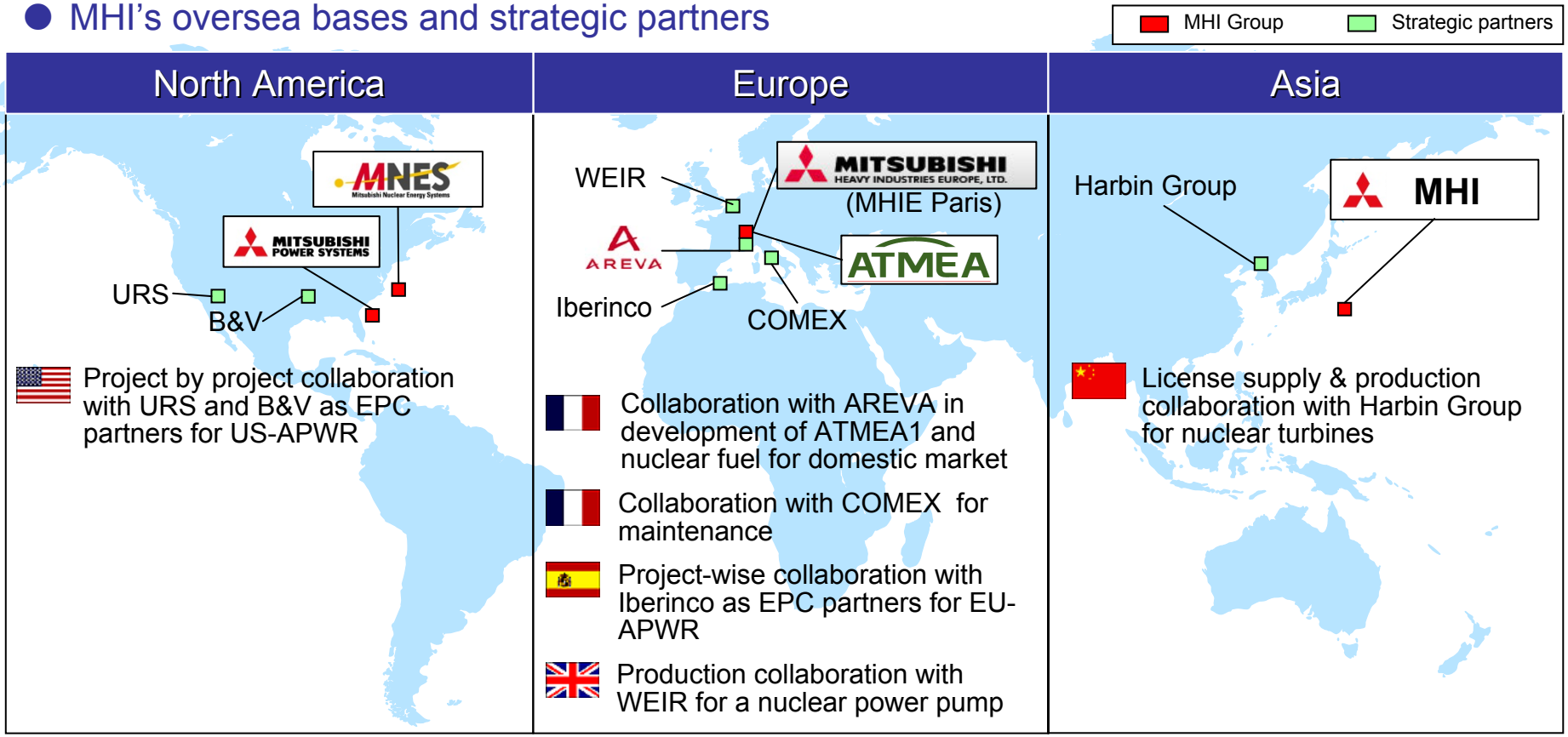


Supply Chain Management; Constructing a Global SCM

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

- Categorizing suppliers depending on QA requirement of nuclear safety
  (Using a domestic supply chain, including in-house manufacturing at MHI, for facilities that are critical for safety and performance; others will be procured locally)
- MHI's global network, including MHI's strategic partners, to enquire at suppliers; selection is made after confirming conformity to the Mitsubishi standard and specifications
- Selected products will be managed with CMIS according to local regulations.

● MHI's oversea bases and strategic partners

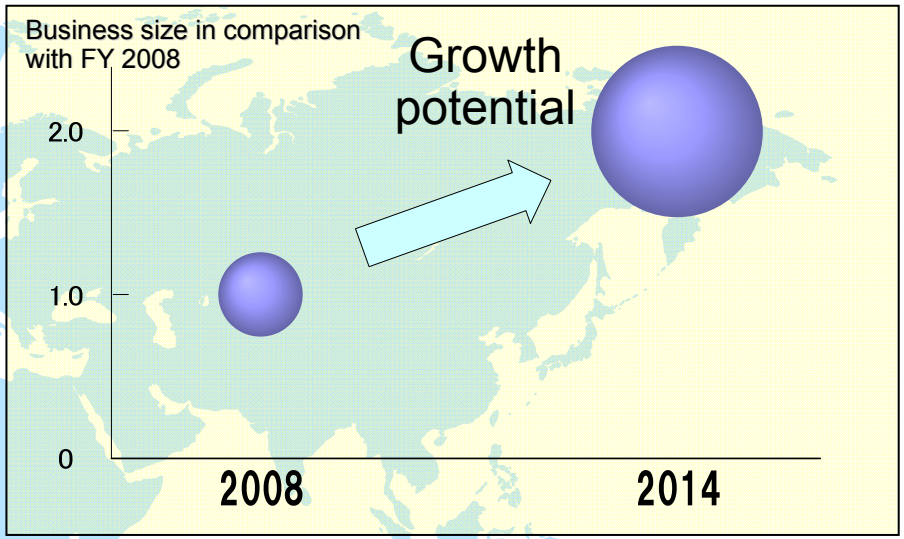


CMIS: Configuration Management Information System

Closing

MITSUBISHI HEAVY INDUSTRIES, LTD.
Our Technologies, Your Tomorrow

Expanding business size and profit, satisfying the policy of improving global environment in industrialized countries, and demands for infrastructure in developing countries.



* The size of circles represent business size

A Leading Company in the Global Nuclear Energy Field

～ Sophisticated Production Capabilities Contribute to Low-Carbon Society ～

MITSUBISHI
HEAVY INDUSTRIES, LTD.

Our Technologies, Your Tomorrow