

The 2nd Japan-Arab Economic Forum

HITACHI
Inspire the Next

Overview of Hitachi Nuclear Capability & Experiences

December 12, 2010

Hitachi, Ltd.

100th
ANNIVERSARY

Celebrating 100 years of the Hitachi Group

Overview of Hitachi Nuclear
Capability & Experiences

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Overview of Hitachi Nuclear
Capability & Experiences

1. Hitachi Corporate Profile

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1-1. Corporate Data

Corporate Name	Hitachi, Ltd. (Kabushiki Kaisha Hitachi Seisakusho)
Founded	1910 (Incorporated in 1920)
Principal Office	6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8280 Japan

As of March 31, 2010

Common Stock	408,810 million yen
Number of Employees (Unconsolidated Basis)	31,065
Number of Employees (Consolidated Basis)	359,746

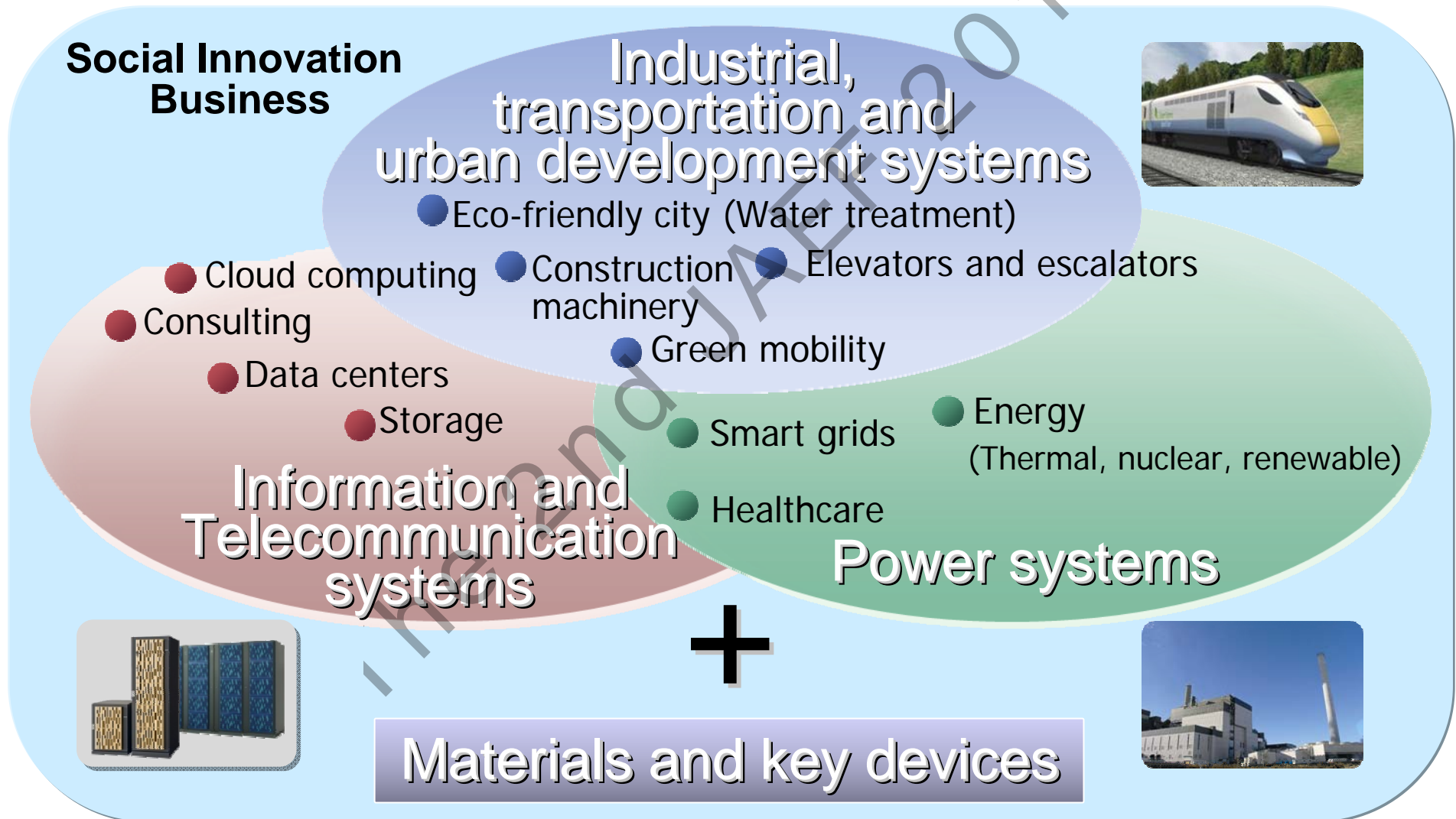
For the Year Ended March 31, 2010

Revenues(Unconsolidated Basis)	1,938,810 million yen
Revenues(Consolidated Basis)	8,968,546 million yen

Stock Overview (As of March 31, 2010)

Capital Stock	408,810 million yen
Common Stock	Authorized: 10,000,000,000 shares Issued: 4,518,132,365 shares
Number of Shareholders	460,320
Stock Exchange Listings	Overseas: New York stock exchange Japanese: Tokyo, Osaka, Nagoya, Fukuoka and Sapporo stock exchanges

“Growth Driven by **Social Innovation Business**” & “Solid Financial Base”



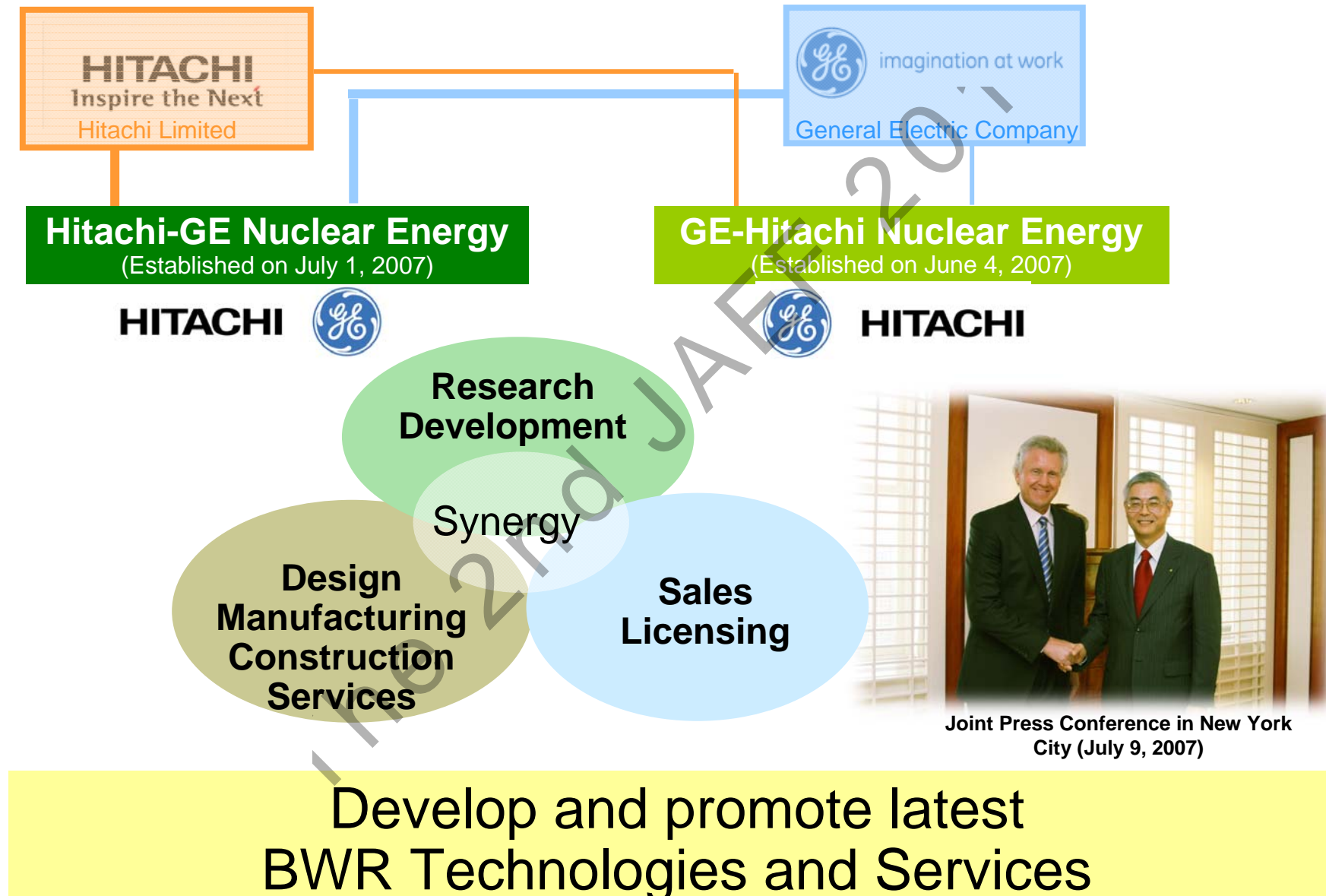
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2. Nuclear Business Organization and Capability

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2-1. Hitachi – GE Global Nuclear Alliance (1)



Joint Press Conference in New York City (July 9, 2007)

2-1. Hitachi – GE Global Nuclear Alliance (2)

- Provide “one stop nuclear solution” covering wide range of products and services



Tokyo, Japan

- Nuclear Power Plants, ABWR, ESBWR, and PRISM
- Nuclear Services
- Advanced Programs ... Recycling, Isotopes

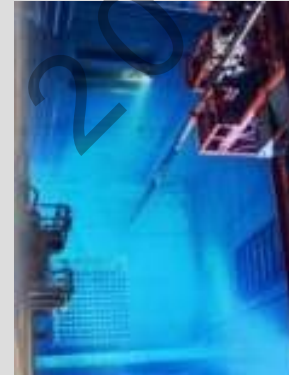


Wilmington, NC



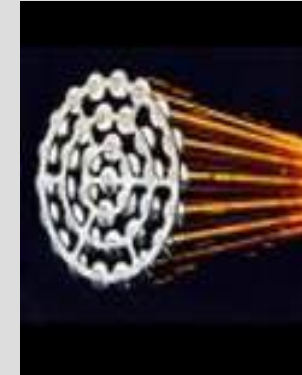
Wilmington, NC

- Uranium Enrichment ... Third Generation Technology



Wilmington, NC
Yokosuka, Japan

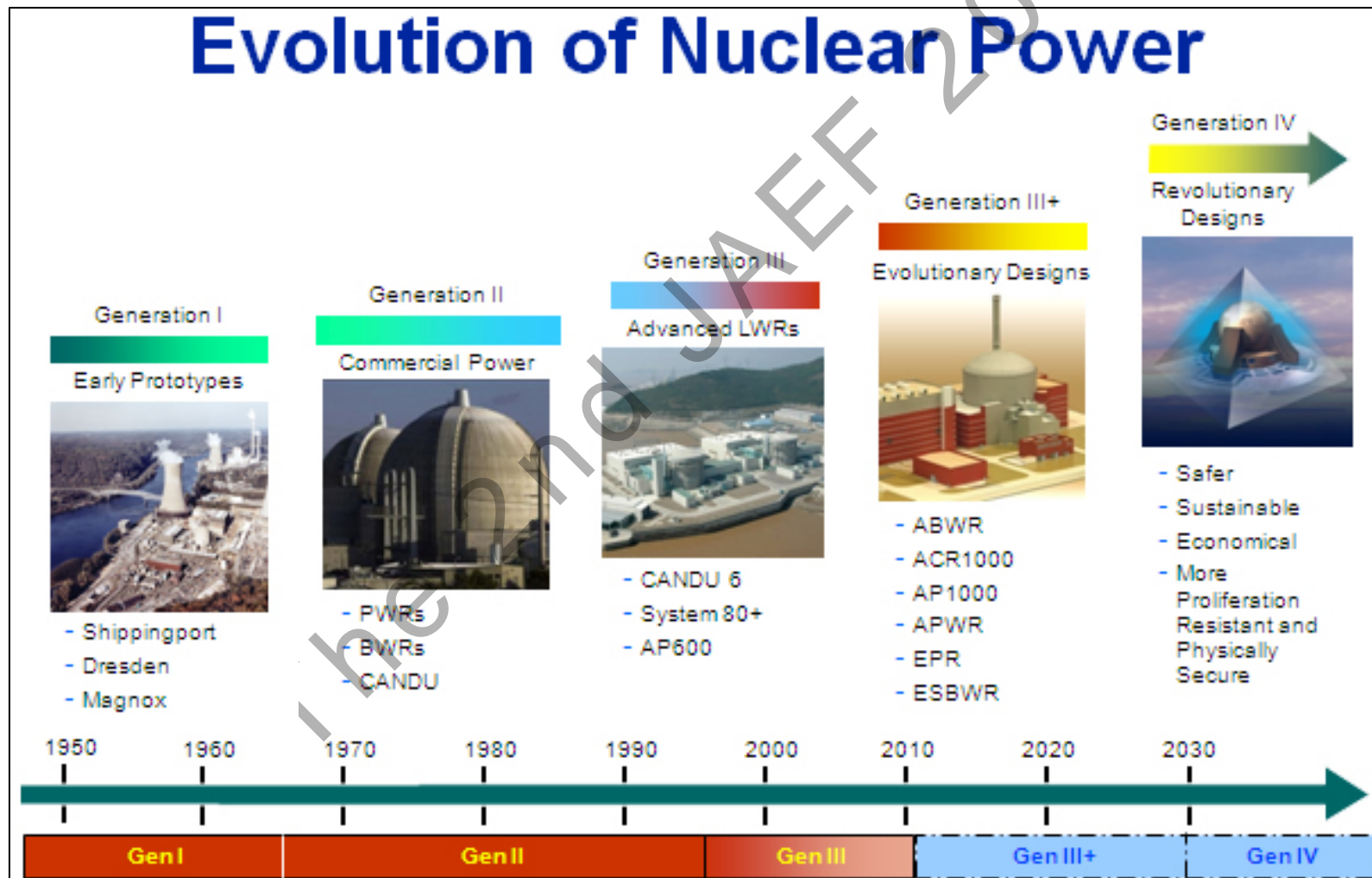
- Nuclear Fuel Fabrication ... BWR and CANDU
- CANDU Services
- Fuel Engineering and Support Services



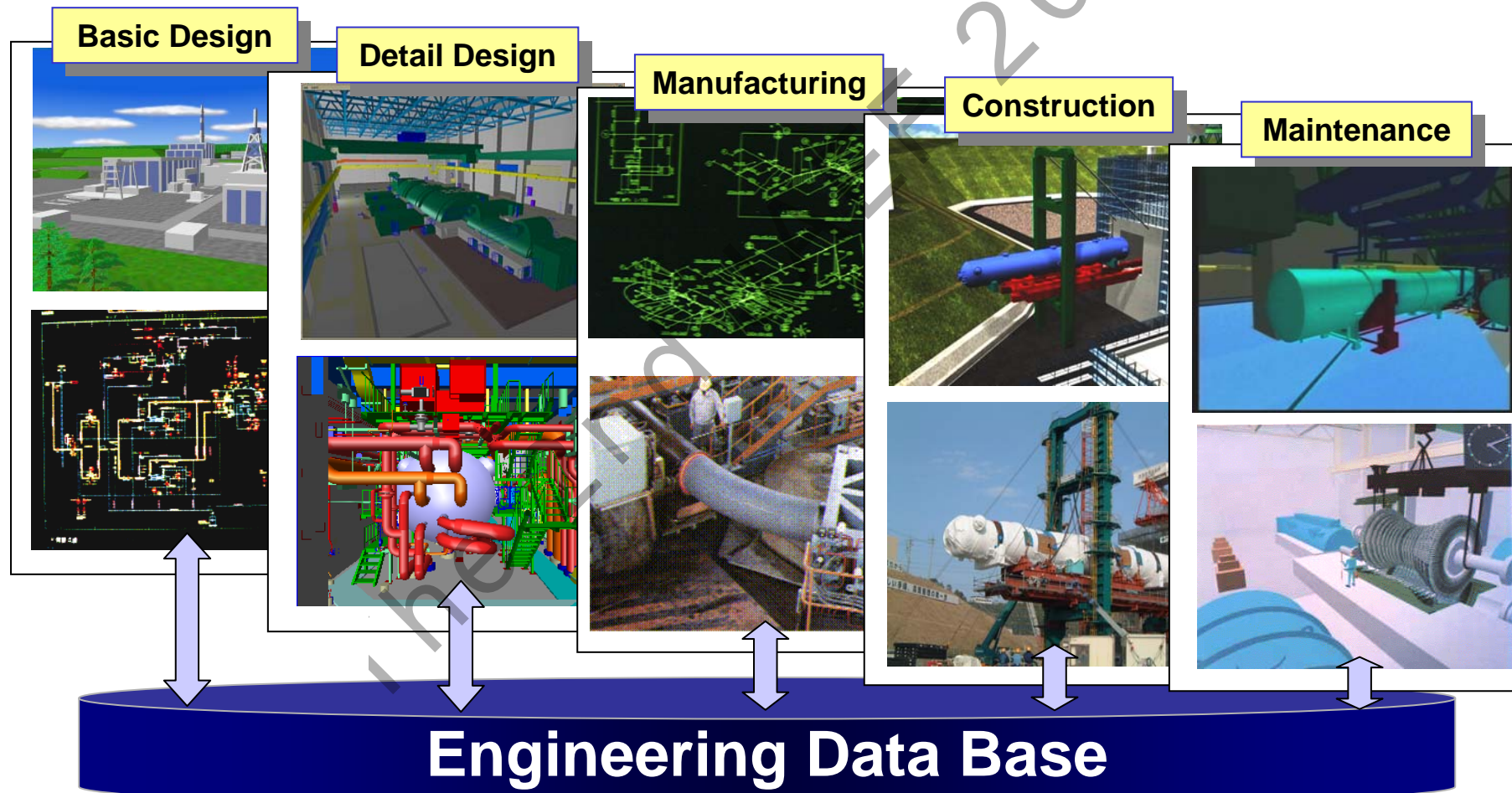
Peterborough, ON
Canada

2-2. ABWR : Only Operating Gen III Reactor

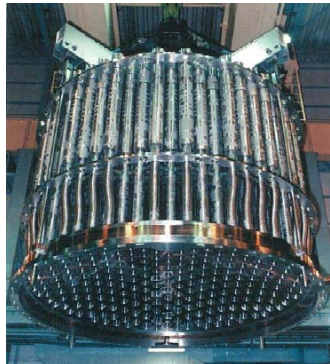
- The only operating Generation III reactor.
- ABWR technology continues to evolve to accommodate various needs and accumulated experiences.



- Integrated CAE provides optimized design, visualization, and information management throughout plant lifetime.



- Fabrication by newest technology and skilled workers



Moisture Separator



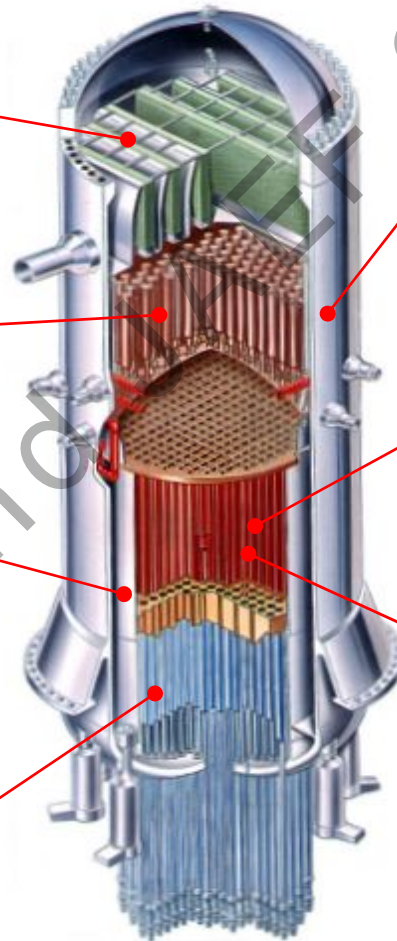
Steam Dryer



Core Shroud



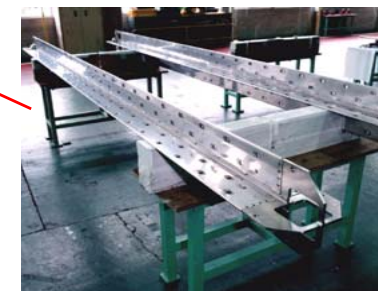
Control Rod Driving Mechanism



Reactor Pressure Vessel



Fuel Assembly



Control Rod

2-5. Evolution of Construction

- The most innovative construction technology has been demonstrated and applied to on going projects

Module Design

Module Fabrication

Simulation

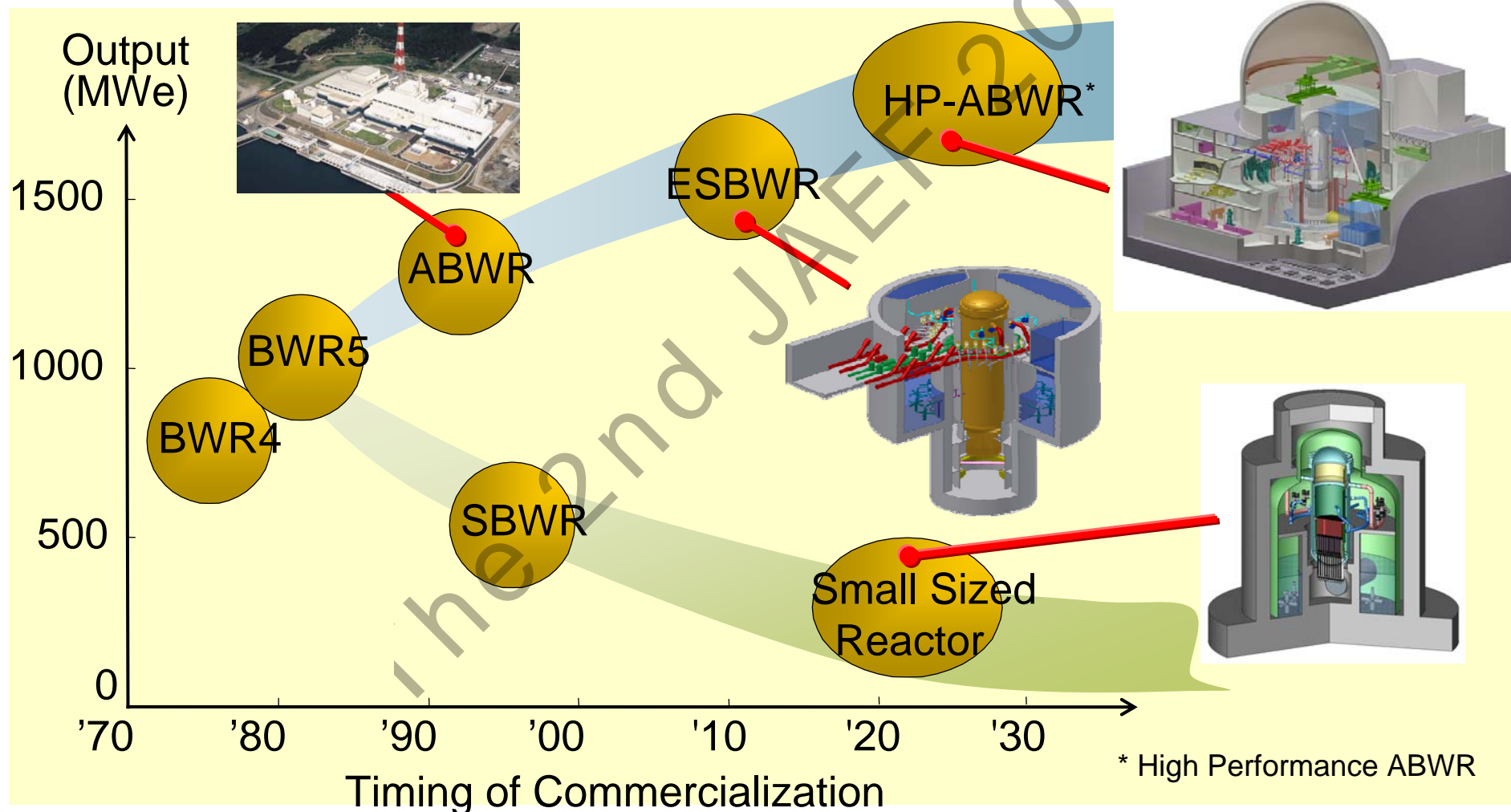
Construction Management

Construction

The World Best Practice of On-time On-budget Construction

2-6. New Plant Development Activities

- Actively participating the new plant development programs
- Large and Small sized reactor concept responding to the various needs of world market



2-7. Plant Maintenance Services

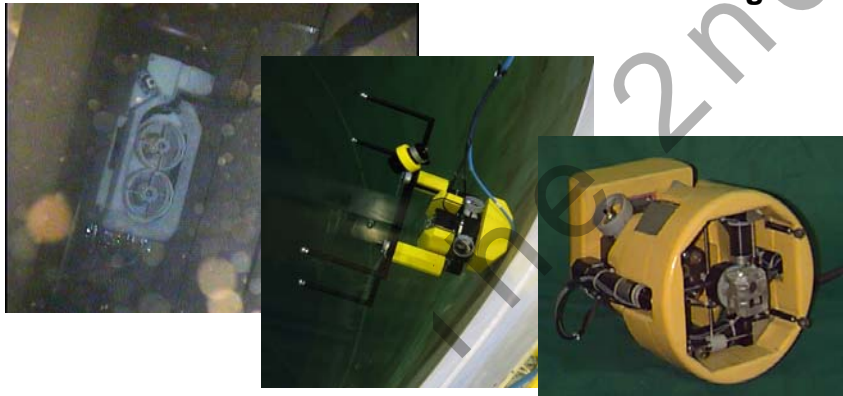
- Continuous efforts on developing maintenance and inspection technologies
- Contributing highly reliable operation of Japan (the lowest number of unplanned automatic scrams)



ICM Housing Repair



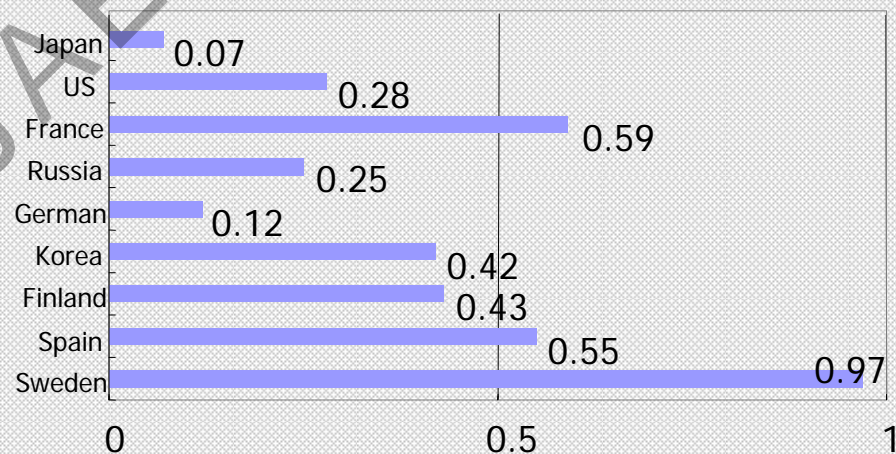
Water Jet Peening



Remotely Operated Vehicles for Inspection

Unplanned Automatic Scrams per 7,000 Hours Critical in Major Countries

(2008)



The unplanned automatic scrams per 7,000 hours critical (UA7)

$$\left(= \frac{\text{Total unplanned scrams while critical in the previous 4 qtrs} \times 7,000 \text{ hrs}}{\text{Total number of hours critical in the previous 4 qtrs}} \right)$$

Source: IAEA PRIS

2-8. Medical Application of Nuclear Related Technology

- Hitachi has actively developed nuclear related technology application to medical field for more than 40 years
- The most advanced proton therapy system has been operated in MD Anderson Cancer Center in US since 2006



Photo above : The first treatment using Hitachi Training Reactor in 1968



Photo right : Proton therapy system in MD Anderson Cancer Center, operation started in 2006



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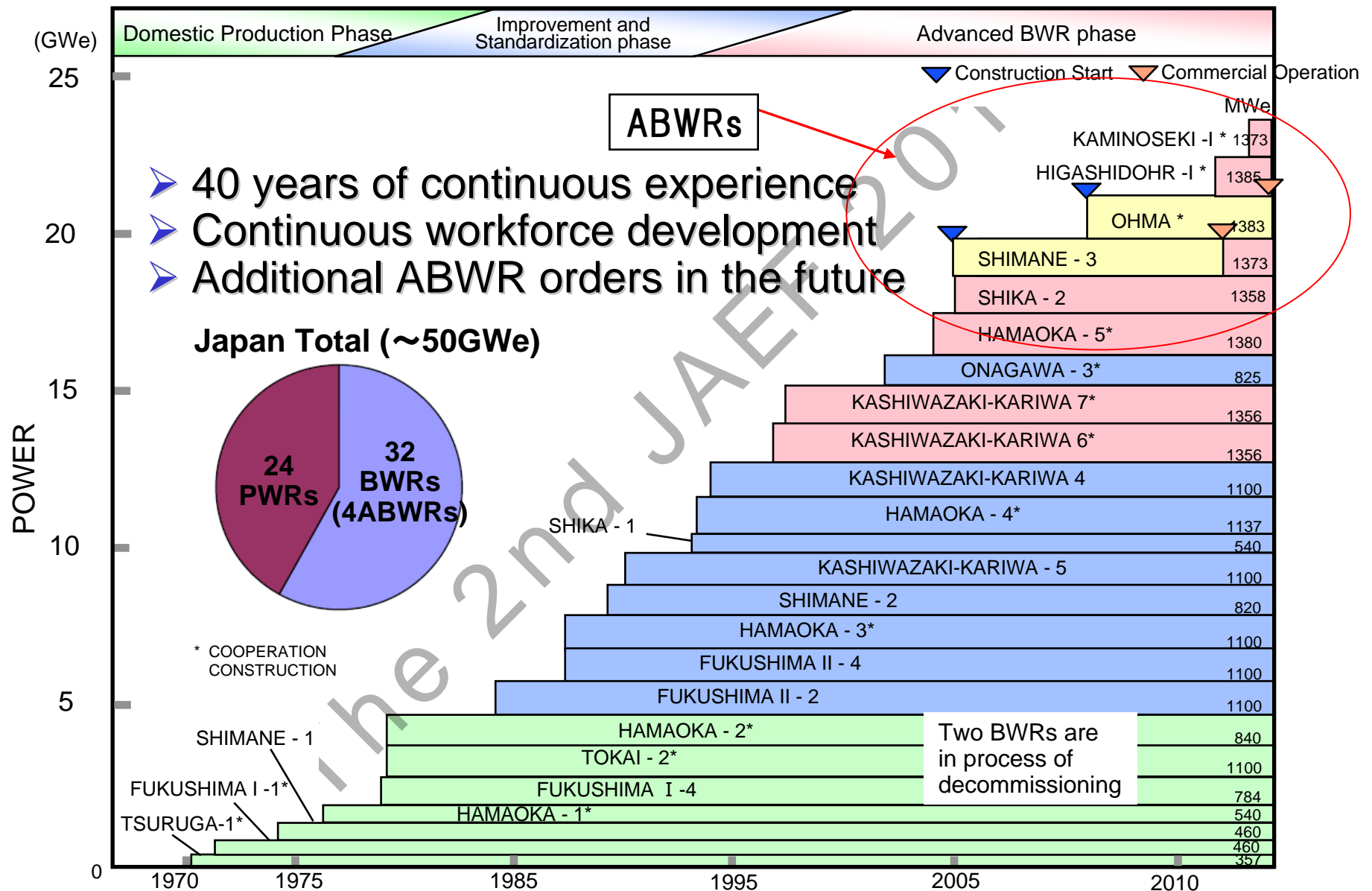
3. ABWR Construction Experience

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3-1. HGNE- Uninterrupted Construction Experience



3-2. BWR Experience in JAPAN (Total 20 Plants)

●Hokuriku Electric Power CO.
Shika NPS



●Tokyo Electric Power CO.
Kashiwazaki-Kariwa NPS



●Tohoku Electric Power CO.
Onagawa NPS



●Chugoku Electric Power CO.
Shimane NPS



●Tokyo Electric Power CO.
Fukushima Daiichi NPS



●Japan Atomic Power CO.
Tsuruga PS



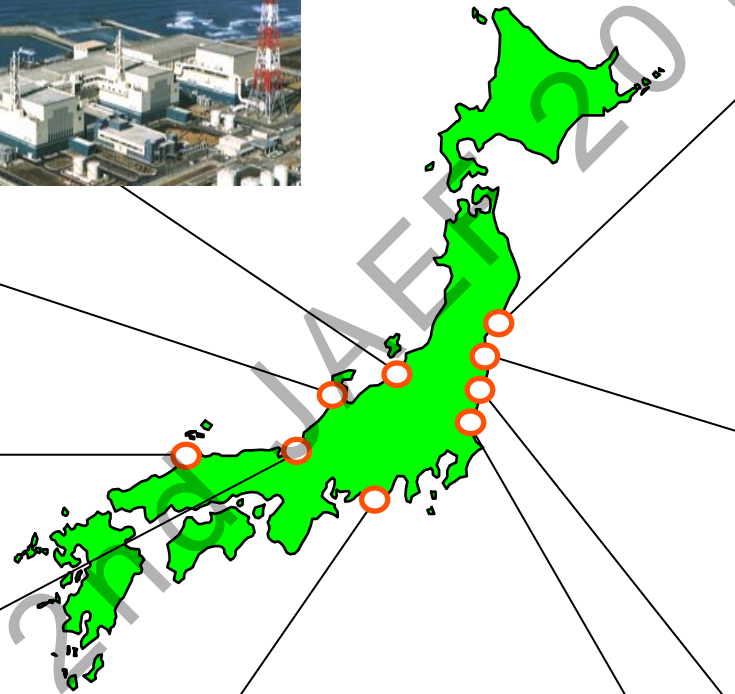
●Chubu Electric Power CO.
Hamaoka NPS



●Japan Atomic Power CO.
Tokai Daini PS



●Tokyo Electric Power CO.
Fukushima Daini NPS



3-3. ABWR Experience in JAPAN (All Projects)

~The only plant of third generation in operation in the world~

- Provided full-plant or major equipments in all 4 completed



Tokyo Electric Power CO.
Kashiwazaki-Kariwa-6/7 (1996/1997)
(H/G/T Joint Venture)



Chubu Electric Power CO.
Hamaoka-5 (2005)
(BOP)



Hokuriku Electric Power CO.
Shika-2 (2006)
(NSSS and BOP)

- Continue to provide series of ABWR projects:



Chugoku Electric Power CO.
Shimane-3 (Under construction)
(NSSS and BOP)



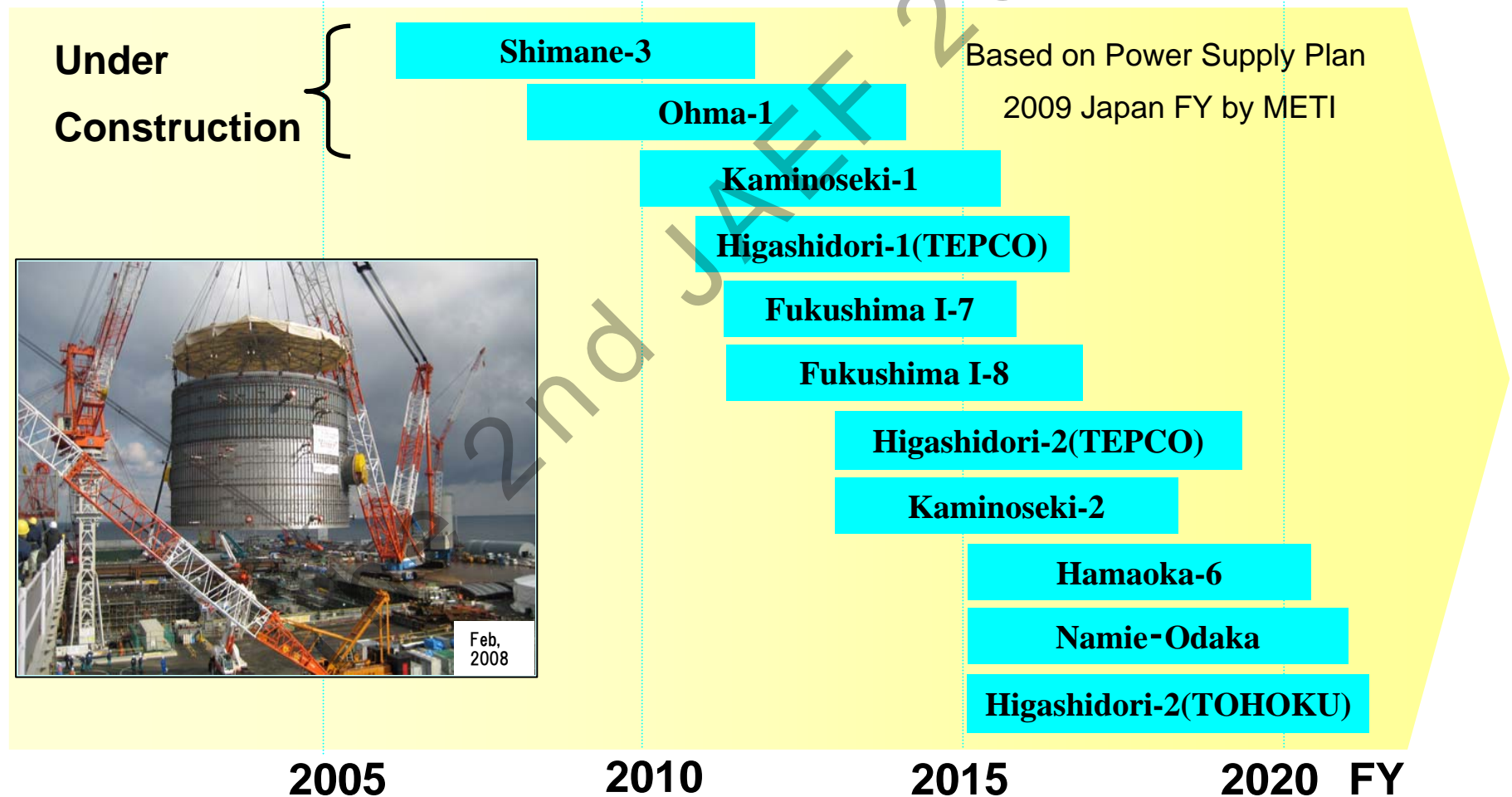
Electric Power Development CO.
Ohma-1 (Under construction)
(NSSS (Full MOX ABWR))



Tokyo Electric Power CO.
Higashidori-1 (Under Licensing Review)
(H/T Consortium)

3-3. New ABWRs under Planning in JAPAN

Continuous construction provides *human resource training opportunities in real projects for any stage from licensing to commissioning*



- Corporate Commitment on Nuclear as a significant part of “Social Innovation Business”
- Hitachi - GE Global Alliance provides “one stop solutions” based on rich experiences both in Japan and US
- On-time On-budget experiences in ABWR constructions
- Continuous projects in the future, which provide human resource development opportunities for countries planning to introduce nuclear power

END

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2010/12/12

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