Strategy on Supply Assurance

The Perspective of Japanese Nuclear Industry

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Special Event at the 50th IAEA GC
September 20,2006

1. Introduction

- About Japan Atomic Industrial Forum (JAIF)
- We fully support a proposal by the Japanese Government: "IAEA Standby Arrangments System for Nuclear Fuel Supply"
- We support the idea of international supply assurance framework.
- Japanese nuclear industry would like to be involved and to contribute to it.

2. Japan's Nuclear Power and Nuclear Fuel Cycle Programs

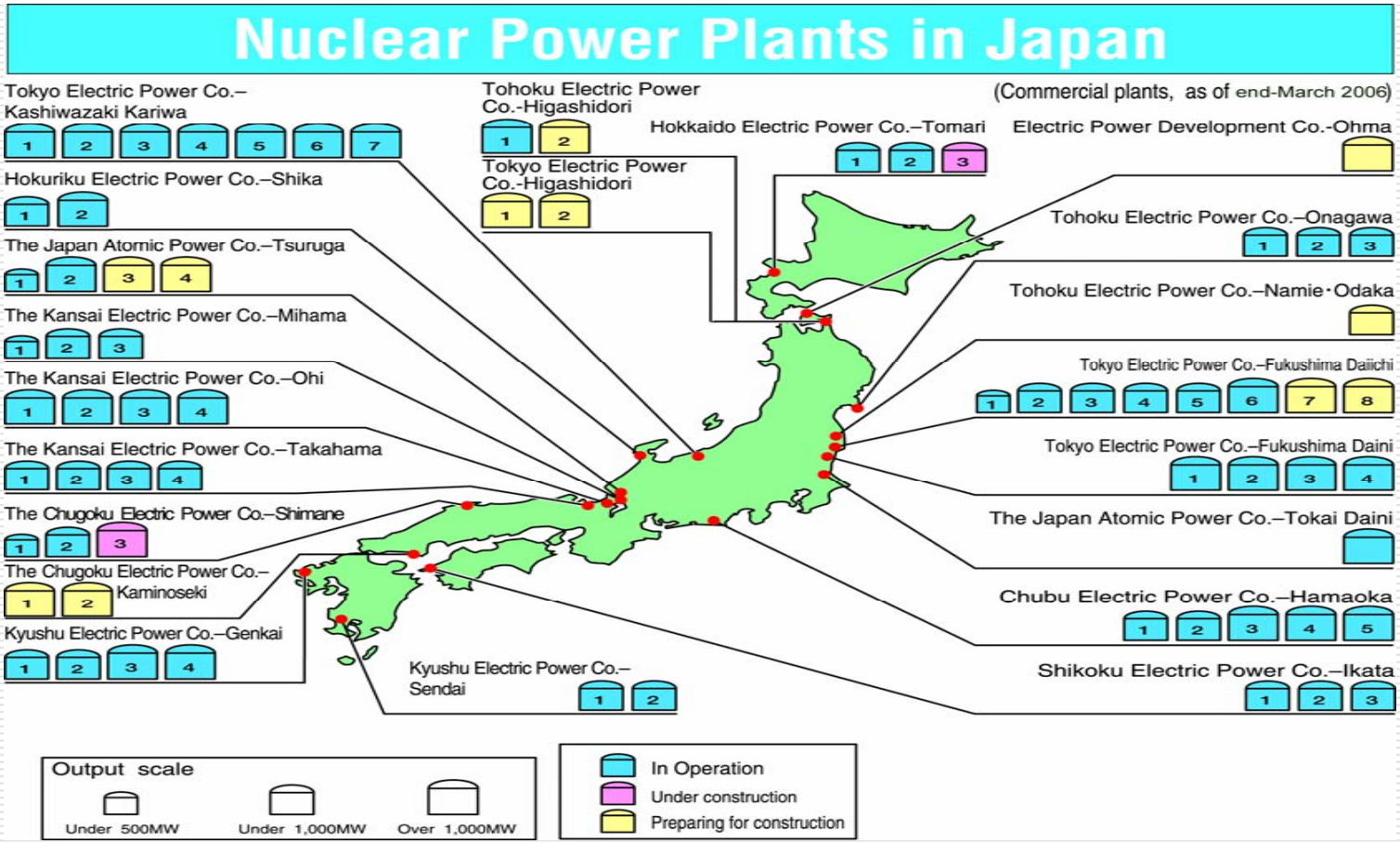
Nuclear power plants in Japan

Generating Capacity of Nuclear Power Plants in the World

As of December 31, 2005
(Japan as of March 31, 2006)

	Country	In Operation		Under Construction		Planned		Total	
		MW	Units	MW	Units	MW	Units	MW	Units
1	U.S.A.	102,745	103					102,745	103
2	France	66,020	59			1,600	1	67,620	60
3	**Japan**	**49,580**	**55**	**2,565**	**3**	**14,945**	**11**	**67,090**	**69**
4	Russia	23,556	31	3,000	3	1,070	2	27,626	36
5	Germany	21,371	17					21,371	17
6	Republic of Korea	17,716	20	4,000	4	5,600	4	27,316	28
7	Canada	13,423	18					13,423	18
8	Ukraine	12,818	14	3,000	3			15,818	17
9	United Kingdom	12,793	23					12,793	23
10	Sweden	9,211	10					9,211	10
World Total		**386,412**	**440**	**30,047**	**35**	**42,270**	**41**	**455,129**	**516**

2. Japan's Nuclear Power and Nuclear Fuel Cycle Programs



2. Japan's Nuclear Power and Nuclear Fuel Cycle Programs

Nuclear Fuel Cycle Facilities in Japan

Reconversion	raw material	products	capacity	operator	start operation	owner	place
MNF	UF6	UO2	450 ton U	Mitsubishi Nuclear Fuel Co., Ltd.	1972	MNF 100%	Tokai mura, Ibaraki, Japan

Enrichment	process	capacity	operator	start operation	owner	place
Rokkasho Nuclear Fuel Cycle Facilities (Uranium Enrichment Plant)	gas centrifuge	1,050 ton SWU	Japan Nuclear Fuel Ltd. (JNFL)	1992	JNFL 100%	Rokkasho-mura, Aomori, Japan

Fuel Fabrication	products	capacity	operator	start operation	owner	place
GNF-J Kurihama Manufacturing Plant	BWR	750 ton U	Global Nuclear Fuel-Japan Co., Ltd. (GNF-J)	1970	GE 60%/ Hitachi 20% /Toshiba 20%	Yokosuka, Kanagawa, Japan
MNF	PWR	440 ton U	Mitsubishi Nuclear Fuel Co., Ltd. (MNF)	1972	MNF 100% (MMC 66% /MHI 34%)	Tokaimura, Ibaraki, Japan
NFI Kumatori Works	PWR	284 ton U	Nuclear Fuel Industries, Ltd. (NFI)	1975	NFI 100%	Kumatori, Osaka, Japan
NFI Tokai Works	BWR	250 ton U	Nuclear Fuel Industries, Ltd. (NFI)	1980	NFI 100%	Tokaimura, Ibaraki, Japan
JAEA Plutonium Fuel Fabrication Facility(PFFF)	MOX	10 ton MOX	Japan Atomic Energy Agency (JAEA)	1972	JAEA 100%	Tokaimura, Ibaraki, Japan
JAEA Plutonium Fuel Production Facility(PFPF)	MOX for FBR	5 ton MOX	Japan Atomic Energy Agency (JAEA)	1988	JAEA 100%	Tokaimura, Ibaraki, Japan

2. Japan's Nuclear Power and Nuclear Fuel Cycle Programs

Rokkasho Reprocessing Facility

Rokkasho Uranium Enrichment Facility and Advanced Centrifuge being developed

3. Supply assurance strategy of Japanese utilities

Three main components of the strategy

- Risk control through long-term contracts
- Risk control through diversified suppliers
- The role of stockpiles in fuel cycle facilities and reactors

4. Comments on Multi-National Approach (MNA)

Requisites for an international framework of supply assurance

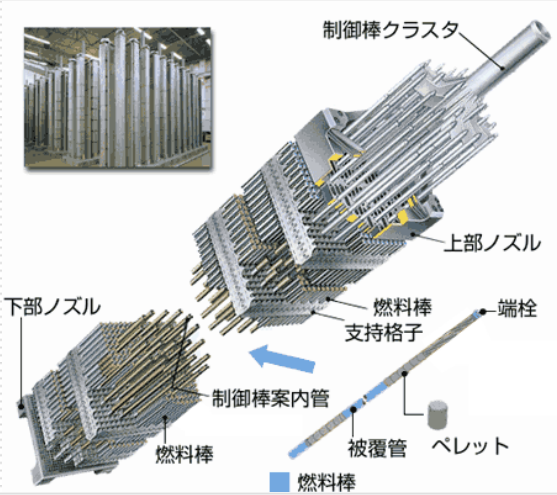
- NPT is the “key stone” for the international non-proliferation regime.
- Consistency with NPT (Article IV).
- Avoid “haves” and “have-nots” problems.
- Needs flexibility: not “black or white” solutions.

4. Comments on Multi-National Approach (MNA)

Comments on Fuel Assembly Bank

- it is not so practical to stockpile fuel assemblies.
- Uranium fuel should be made available in the form of enriched UO2 powder or yellow cake (U3O8).

Typical BWR fuel assembly (left) and PWR fuel assembly (below)



4. Comments on Multi-National Approach (MNA)

Availability of Recovered Uranium

- Japanese utilities have 7,000 ton U of “recovered uranium” from reprocessing in Europe and Japan.
- Recovered U has higher U-235 contents (about 1%).
- It can be made available to international fuel bank on commercial basis.

5. Conclusions

- Nuclear non-proliferation regime needs to be strengthened; NPT regime needs to be reinforced.
- Japan makes the strongest commitments to nuclear non-proliferation.
- Japanese nuclear industry wishes to contribute to the new framework as a potential supplier.


Thank you very much
for your attention