

JAEA Study on System Flow of Alternative Fuel / Service Supply

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**Nuclear Nonproliferation Science and Technology Center (NPSTC)
Japan Atomic Energy Agency (JAEA)**



Procurement of Nuclear Fuels / Services from Market

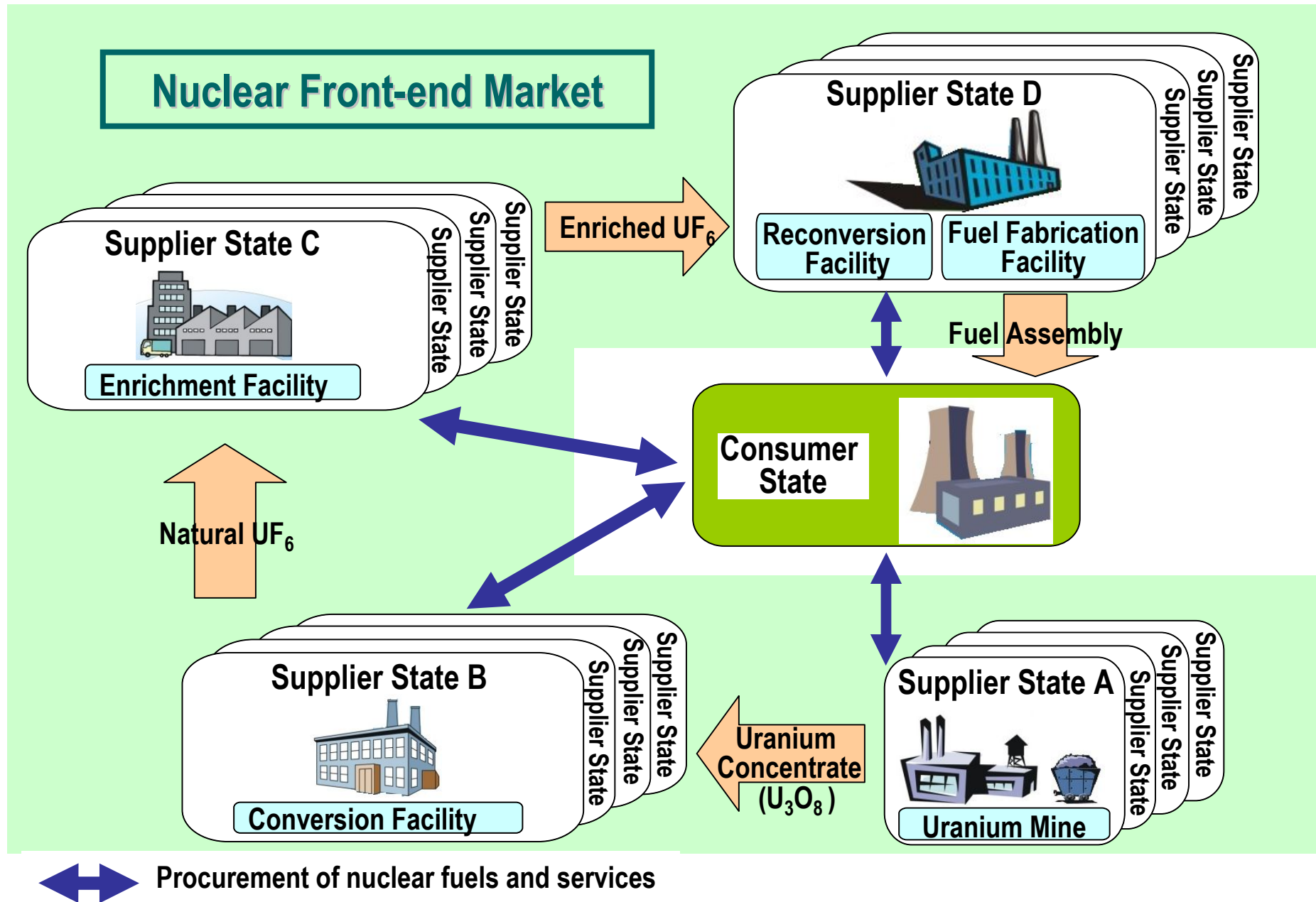
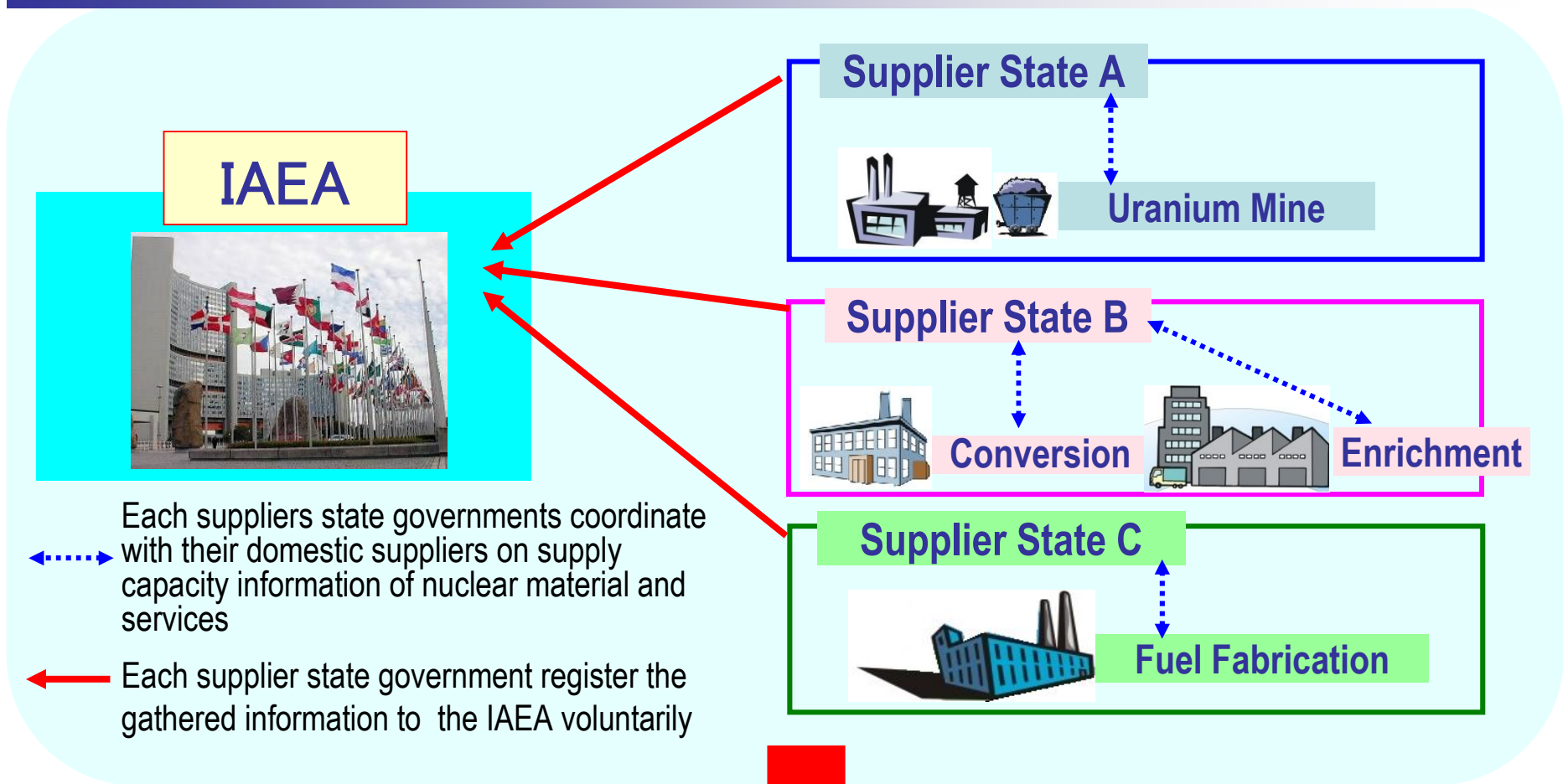


Image of Supply Capacity Registration Based on Japanese Proposal --IAEA Standby Arrangements System for the Assurance of Nuclear Fuel Supply--



Each suppliers state governments coordinate with their domestic suppliers on supply capacity information of nuclear material and services

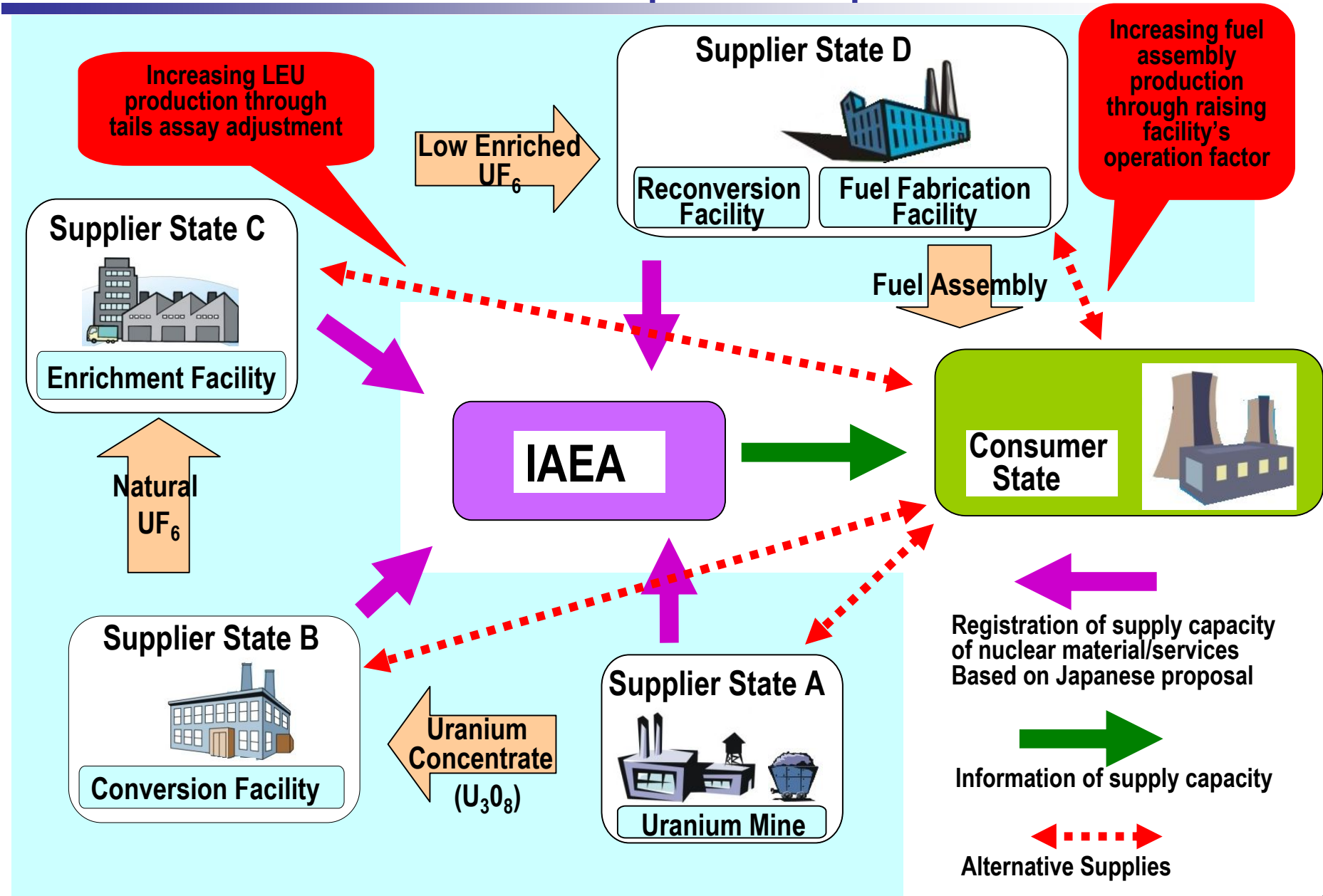
Each supplier state government register the gathered information to the IAEA voluntarily

By enhancing the transparency of the whole front-end market, reducing the possibility of supply failure

Example: Supply Capacity Registration of State X in the year of 20XX

<p style="text-align: center;">Areas of Registration</p> <p style="text-align: center;">■:materials ■:services</p> <p>Registration Level</p>	<p style="text-align: center;"><u>Uranium Concentrate</u> (U₃O₈) <u>Natural Uranium</u> (UF₆)</p> <p style="text-align: center;"><Fuel Bank></p>	<p style="text-align: center;"><u>Conversion Service</u></p> <p style="text-align: center;"><Capacity: 5,000tU/y></p>	<p style="text-align: center;"><u>Enrichment Service</u></p> <p style="text-align: center;"><Capacity : 10,000tSWU/y></p>	<p style="text-align: center;"><u>Low Enriched Uranium (LEU)</u> (UF₆ or UO₂)</p> <p style="text-align: center;"><Fuel Bank></p>	<p style="text-align: center;"><u>Fuel Fabrication Service</u> (inc. re-conversion)</p> <p style="text-align: center;"><Capacity : BWR 500tU/y PWR 1,000tU/y></p>
<p>Level 1</p> <p>Not exporting but has the will to cooperate. Quantity would be limited and considerable time would be needed.</p>	<p>U₃O₈ 200~300tU (12 months)</p>	<p>----</p>	<p>----</p>	<p>----</p>	<p>----</p>
<p>Level 2</p> <p>Exporting and has the will to cooperate as much /soon as it can.</p>	<p>----</p>	<p>----</p>	<p>----</p>	<p>UF₆ 30~50tU (9 months)</p>	<p>----</p>
<p>Level 3</p> <p>Exporting and has the will to cooperate through reserve/supply capacity in a short period of time.</p>	<p>----</p>	<p>100tU (3months)</p>	<p>200tSWU (3 months)</p>	<p>UO₂: 30tU (1 month)</p>	<p>BWR: 20tU PWR: 50tU (6~9 months)</p>

Alternative Supplies in the more Transparent Market as a result of Japanese Proposal



Two light green, stylized leaves are positioned behind the text. The leaf on the left is slightly larger and has a small white circular mark near its top edge. The leaf on the right is slightly smaller and is positioned to the right of the first leaf. Both leaves have a soft, slightly blurred appearance.

Thank you for your Attention