

# Nuclear Non-proliferation and International Uranium Enrichment Centre

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# Major criteria of sustainable development of nuclear power

- Meeting requirements of the international nuclear non-proliferation regime
- Long-term solution of radioactive waste management
- Nuclear safety
- Environmental friendliness
- Economic competitiveness
- Availability of resources

# Present-day Nuclear Fuel Cycle and New Challenges to Nuclear Non-proliferation

- ❑ In the mid-term nuclear power is doomed to develop on the basis of present-day technologies of thermal nuclear reactors and associated fuel cycles, including use of sensitive technologies of U enrichment and spent fuel reprocessing
- ❑ Access to sensitive technologies – a legal way to produce weapons-grade nuclear materials: highly enriched U and separated Pu
- ❑ Article IV of the NPT grants «... the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes ...», not excluding an access to sensitive nuclear technologies
- ❑ Emergence of new nuclear weapons states may set a bad example
- ❑ Identified facts of illegal transfers of nuclear materials and equipment usable for making nuclear weapons
- ❑ Substantial increase of political instability (incl., terrorist threats) in traditionally tense regions
- ❑ Booming development of information technologies simplifies access to sensitive information

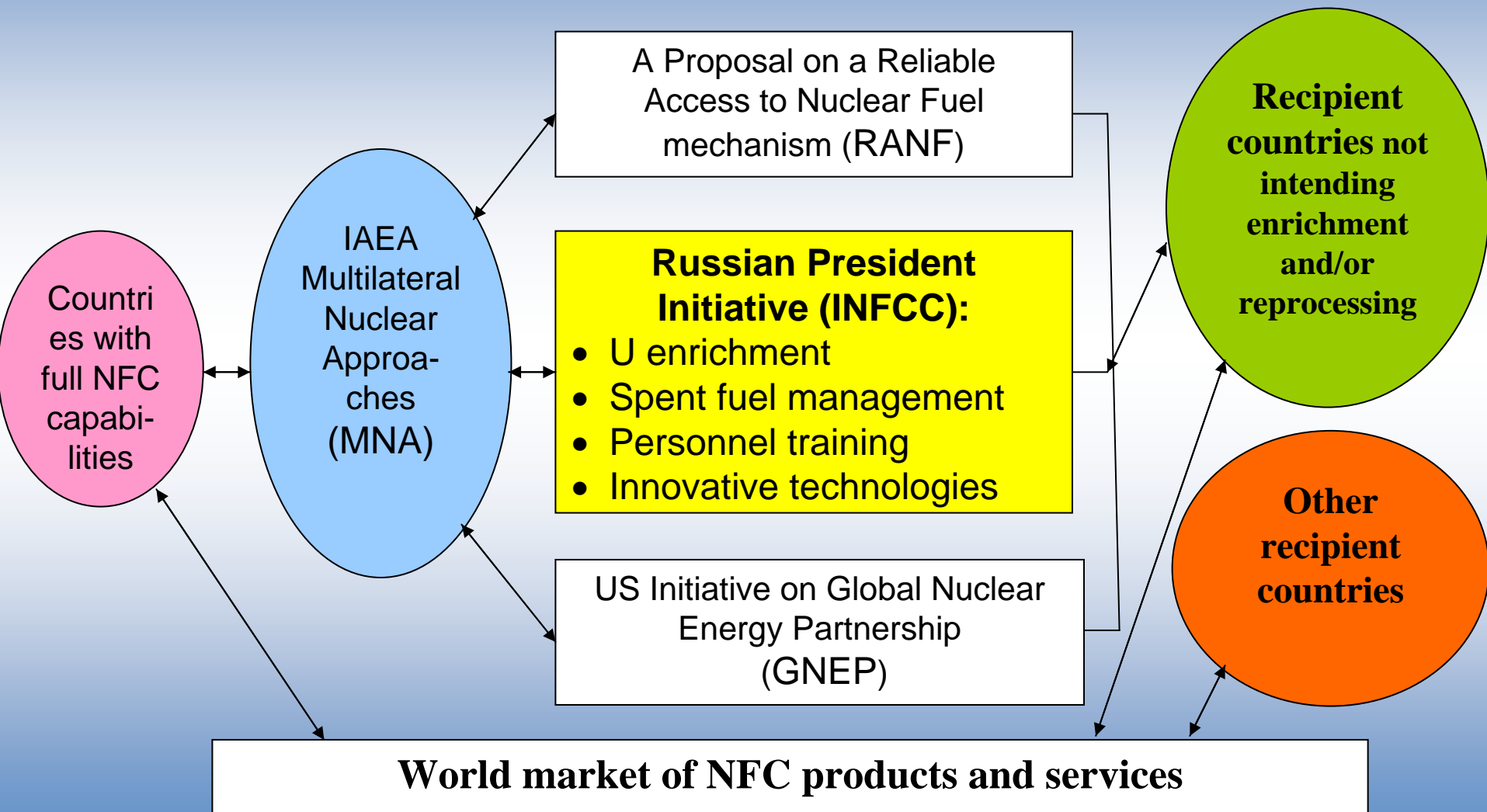
# G8 Statements on Non-proliferation in Sea Island (2004) and Gleneagles (2005)

- ❑ Implementation of a restrained strategy – introduction of a moratorium on new initiatives related to transfers of sensitive nuclear equipment and technologies to countries, who do not possess those
- ❑ Provision of an assured access to nuclear fuel and related nuclear fuel cycle (NFC) services for states, who meet the non-proliferation requirements and do not intend to acquire indigenous NFC capabilities
- ❑ Assured access to the NFC services on market conditions
- ❑ G8 support of the IAEA efforts on Multilateral Nuclear Approaches (MNA) to the nuclear fuel cycle

# Initiative of the Russian President

- Global energy security – lead subject of Russia's chairmanship in G8 in 2006
- Initiative of the Russian President of 25 January 2006:
  - Enhancement of the role of nuclear power in the global energy security
  - Development of a global nuclear power infrastructure by setting up a network of International nuclear fuel cycle centres, including those on the Russian soil
  - Provision of an equal (non-discriminative) and assured access to the nuclear fuel cycle products and services for countries developing nuclear power and not intending to acquire indigenous U enrichment and spent fuel reprocessing capabilities

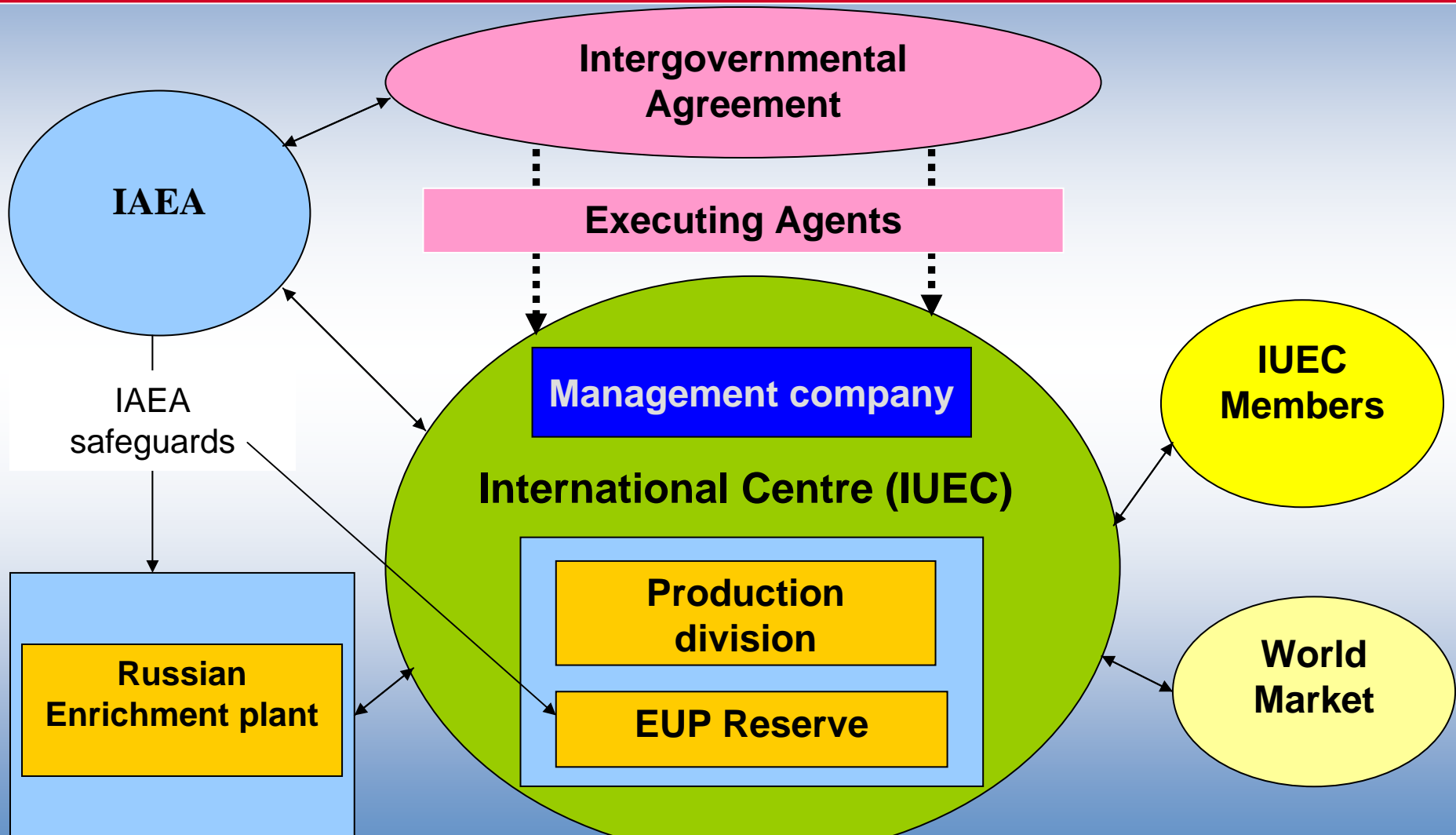
# Basic Elements of an emerging International Assured NFC Products and Services Supply System



# Basic Elements of International Uranium Enrichment Centre (IUEC)

- An Intergovernmental agreement (or a set of agreements) between interested countries and the IAEA
- A management company to be set up to control the Centre's material and financial flows, development of production and investment programmes, contracting the source material procurement and enrichment services (organizational and legal basis of the company needs to be developed)
- A base production enterprise – an existing Russian enrichment plant to be put under the IAEA safeguards
- An enriched uranium product (EUP- UF6) reserve to be put under the IAEA safeguards and administrative management

# International Uranium Enrichment Centre (IUEC) Organization and Management





# Fundamental IUEC Principles

- ❑ Equal, non-discriminative membership conditions (criteria) for all interested countries (to be developed)
- ❑ The “pros” (political, economic, technological) of being a member of the IUEC should outweigh the “cons” of foregoing the domestic NFC capabilities
- ❑ Participation of executing agents in the IUEC management (international management)
- ❑ Transparent IUEC commercial activities (according to the international practices)
- ❑ Cost-effectiveness and investment attractiveness
- ❑ Provision of enrichment services rather than EUP (customer’s source material)
- ❑ Lack of access to Russian enrichment technology (a standard “black box” concept)

# Assured Access to Enrichment Services on Market Conditions

- ❑ Commitments of Russia and other member-states defined in the Intergovernmental agreement
- ❑ Executing agents – IUEC members - authorized by their respective governments
- ❑ IUEC International status, involvement of the IAEA in its activities (the form of such involvement to be discussed)
- ❑ Availability of Russian high-tech competitive enrichment capabilities
- ❑ Long-term enrichment services IUEC supply contracts based on world market price indexes; for the enrichment plant – priority implementation of orders contracted by the IUEC members
- ❑ Reserve EUP stock to be used as a last resort (a safety net) to meet the IUEC contractual commitments in case of disrupted market mechanisms

# How Would Foreign IUEC Members Benefit ?

- ❑ Assured access to enrichment services
- ❑ Increased energy security and reliability of nuclear fuel supply
- ❑ Opportunity for profitable investments into the U enrichment enterprise based on an up-to-date high-tech competitive technology
- ❑ Savings of the country's resources due to foregoing (temporary ?) domestic enrichment capabilities
- ❑ Diversification of enrichment services supply

# How would Russia benefit ?

- A contribution to enhanced global energy security
- A practical step in the realization of the G8 policies and the IAEA Multilateral Nuclear Approaches (MNA) in relation to strengthening the nuclear non-proliferation regime
- Attraction of foreign investments
- An opportunity to increase export of Russian high-tech nuclear products and services