



# **U.S. Nuclear Industry's Increasing Engagement in Foreign Markets**

## **Impact on the U.S. NRC**

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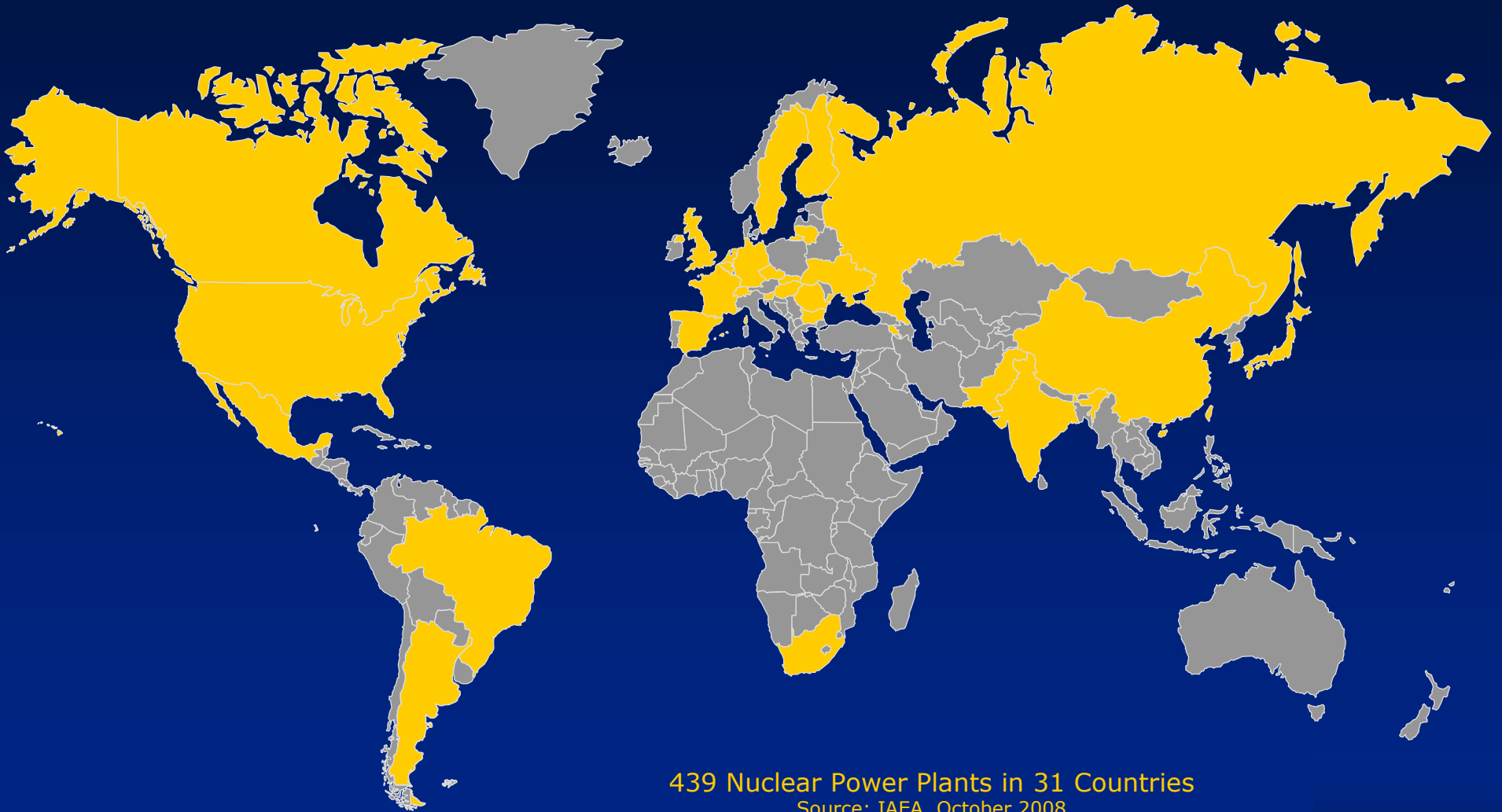
## Presentation Organization

- Global Expansion of Nuclear Power
- Impact on the U.S. NRC
  - Agreements/Arrangements
  - Import/Export
  - Bilateral and Multilateral Cooperation
  - Bilateral and Multilateral Assistance
- Conclusion

## Global Expansion of Nuclear Power

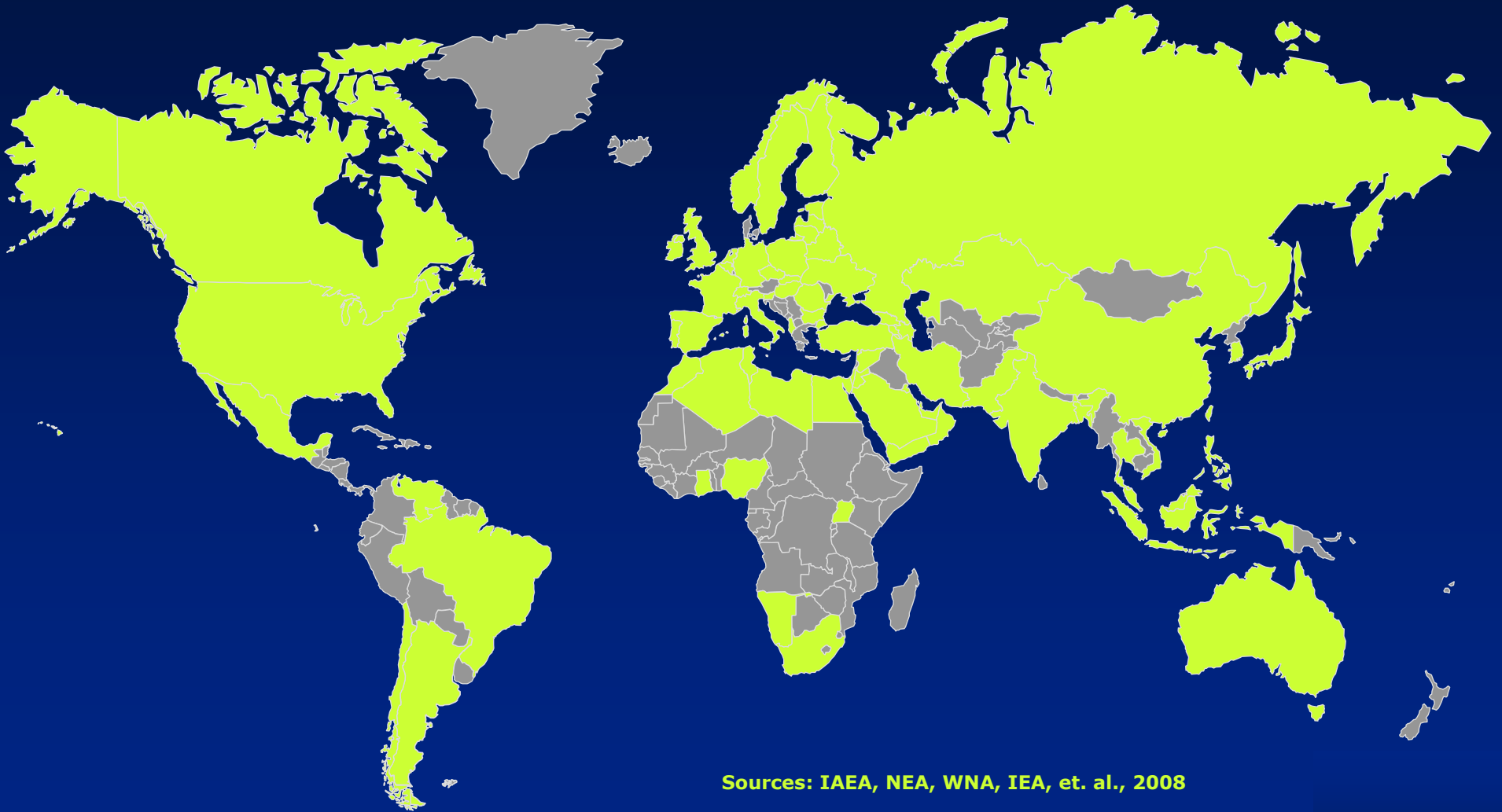
- 439 nuclear power plants operating in 31 countries with 37 plants under construction (as of October 2008).
- 40 to 50 countries that currently do not have nuclear power programs are considering pursuing development of such a program by 2020 and many countries with nuclear power programs are expanding these programs.

# Countries With Operating Nuclear Power Plants



439 Nuclear Power Plants in 31 Countries  
Source: IAEA, October 2008

## Looking to the Future: Map of Countries With Operating Nuclear Power Plants



Sources: IAEA, NEA, WNA, IEA, et. al., 2008

## Impact on NRC - Agreements

- Section 123 Agreements in Force
  - Argentina, Australia, Bangladesh, Brazil, Canada, China, Colombia, Egypt, European Atomic Energy Community, India, Indonesia, Japan, Kazakhstan, Republic of Korea, Morocco, Norway, Peru, South Africa, Switzerland, Thailand, (Taiwan), Turkey, Ukraine and the IAEA
- Section 123 Agreements Ongoing or Planned
  - Jordan, United Arab Emirates, etc.

## **Impact on NRC – Information Exchange and Cooperative Research Arrangements**

- 37 technical information exchange arrangement and letter of agreement partners in force
  - Argentina, Armenia, Belgium, Bulgaria, Brazil, Egypt, Canada, China, Czech Republic, Egypt, Finland, France, Germany, Greece, Hungary, Indonesia, Italy, Israel, Japan, Kazakhstan, Lithuania, Mexico, Netherlands, Peru, Philippines, Romania, Russia, Slovak Republic, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, (Taiwan), Ukraine and the United Kingdom
- Global expansion of nuclear power could, within the next five years, easily double the number of NRC's technical information exchange and cooperative research arrangement partners

## Impact on NRC – Import/Export

- Commodities under NRC import licensing authority include nuclear production and utilization facilities and special nuclear, source and byproduct material. Export/import licensing actions for FY 2008:
  - 112 applications received
  - 133 licenses issued
  - 136 licensing actions completed
  - 5 10 CFR Part 810 reviews completed
  - 3 subsequent arrangements
- Global expansion of nuclear power, combined with additional emphasis on radioactive materials, could, in the next five years, easily double NRC's import/export licensing workload

# Impact on NRC – Bilateral and Multilateral Cooperation

- Cooperative activities include:
  - Bilateral safety and security technical information exchange
  - First-of-a-kind construction outside of the U.S.
  - Major component manufacturing outside of the U.S.
  - Multinational Design Evaluation Program
  - Foreign Assignees
- Requests for new reactor-related cooperation with NRC have doubled since early 2007, and are expected to continue to increase.

# Impact on NRC – Bilateral and Multilateral Assistance

- Requests for new reactor-related regulatory assistance have tripled since early 2007, and are expected to continue to increase.
- This includes regulatory authorities from countries just starting a nuclear power program, countries with small nuclear power programs, and even countries with developed nuclear power programs.
- Assistance activities include:
  - Regulatory legal basis
  - Organization and staffing
  - Regulatory technical requirements
  - Foreign Assignees
  - Pilot assistance projects

## Impact on NRC – Bilateral and Multilateral Assistance (continued)

- NRC is working with other assistance providers to coordinate and maximize utilization of regulatory resources, including:
  - Support for NEA and IAEA
  - Enhancing internal and external coordination
  - Development of bilateral and regional approaches
  - Use of retired annuitants and contractor personnel

## Conclusion

- U.S. nuclear industry's engagement in foreign markets has had, and will continue to have, a significant impact on NRC.
- NRC is working (including with other parts of the U.S. government, international institutions like the IAEA and the NEA and with our international regulatory counterparts) to meet this challenge.