

CENTRE ON NUCLEAR POWER SAFETY

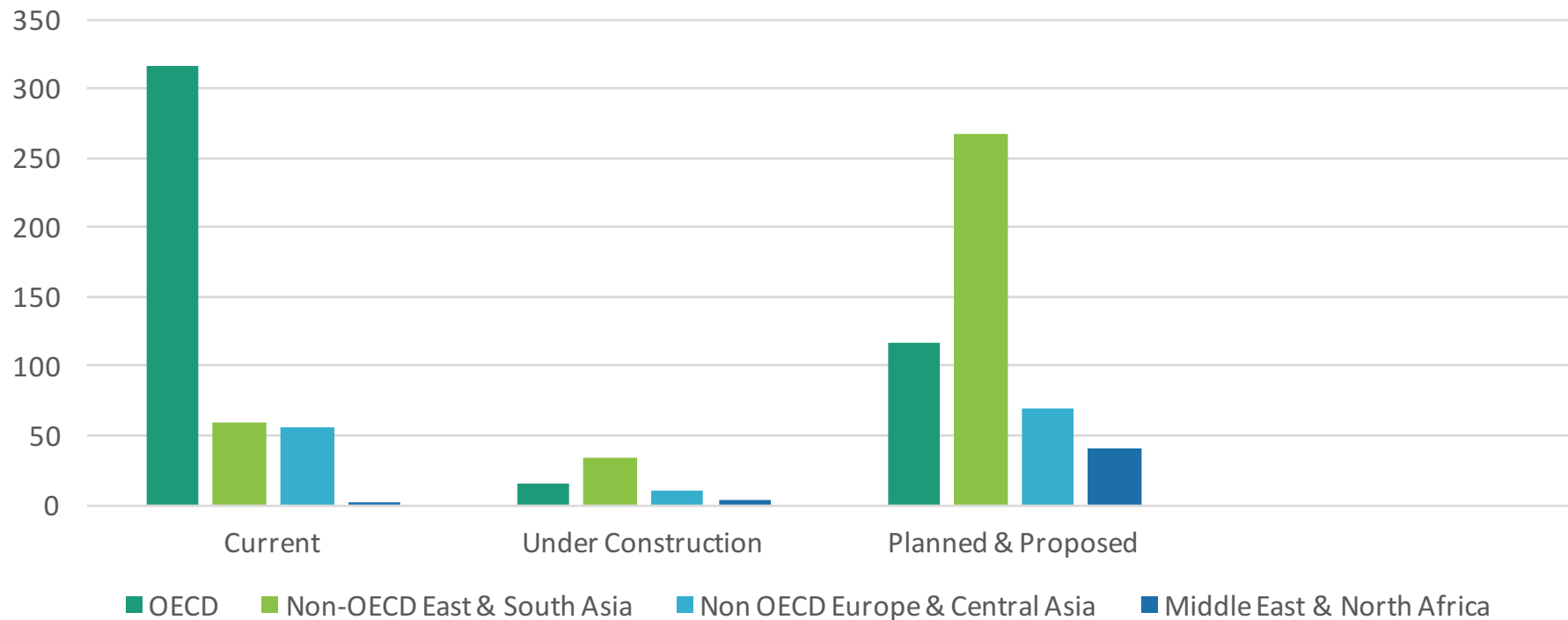
Culture of Safety

**NEW MANHATTAN PROJECT-
SCIENCE FOR PEACE THE WORLD OVER**

**PROJECT COORDINATORS: Prof. C. DiFiglio,
Dr. A. Shihab-Eldin, Dr. H. Rogner**

The Expected Growth of Nuclear Power is Outside of the OECD

World Nuclear Association Nuclear Reactor Table, January 2016



If nuclear power is to be deployed safely in countries without a current commercial nuclear program, it is necessary to have (partial list):

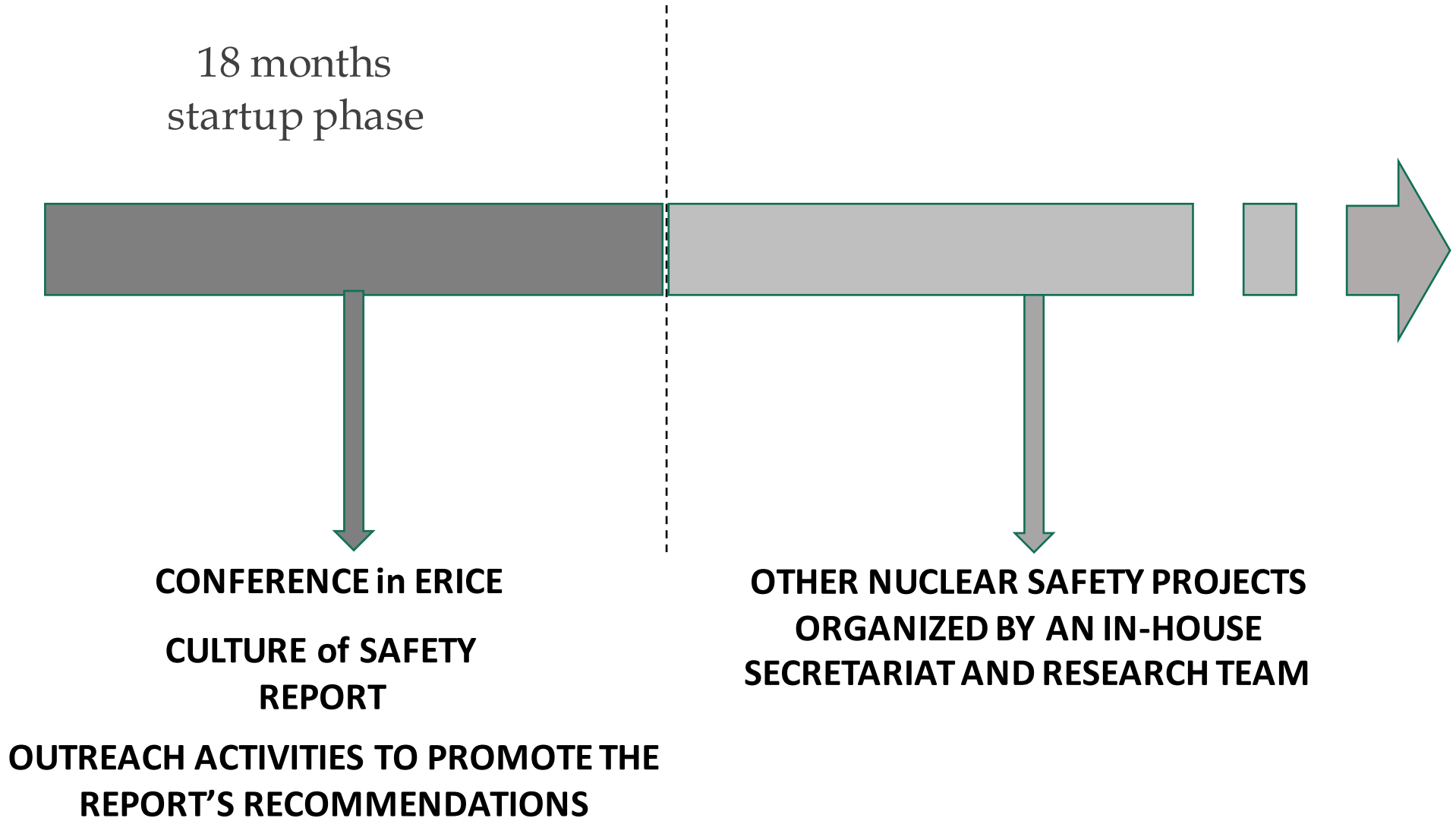
- **An independent regulatory agency with both authority and resources.**
- **A commitment to transparency in management practices and communication, and a strong continuity of institutions.**

- In addition, due to cost, it is not likely that many planned reactors, in the OECD, where these factors are taken for granted, will be financed.

Consequently,

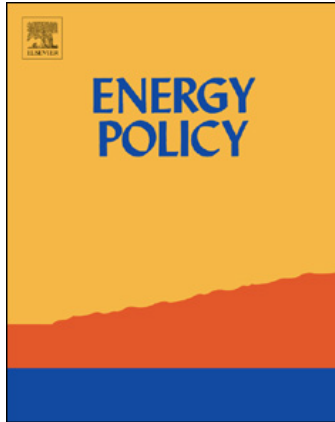
- Developing an initiative to encourage a culture of safety in emerging nuclear power countries was identified as the first project for the proposed Nuclear Safety Centre.
- The outcome of this project is not limited to a report;
- It also includes an outreach programme to promote the principles and recommendations outlined in the report.

TIME FRAME & OBJECTIVES



Topics After the Start Up Phase

- VULNERABILITIES OF EXISTING AND PLANNED NUCLEAR INFRASTRUCTURE TO TERRORISM OR SABOTAGE
- MANAGEMENT AND FINAL DISPOSITION OF USED NUCLEAR FUEL
- SAFETY OF SELECTED ADVANCED REACTOR CONCEPTS
- ADEQUACY OF THE SCIENCE BASIS FOR REACTOR-LIFE EXTENSION BEYOND THE ORIGINAL LICENSING PERIOD
- SAFETY MEASURES UNDERTAKEN IN RESPONSE TO THE PROBLEMS REVEALED AT FUKUSHIMA DAI-ICHI



The report presented at the 2015 Erice Seminars is now a Special Issue of *Energy Policy: Renewable and Nuclear Electricity: Opportunities, Challenges and Policy Recommendations, Volume 96, September 2016*

- **Carmine Difiglio, Guest Editor's Editorial: Introduction, collective findings and policy recommendations**
- **Bruce N. Stram, Key challenges to expanding renewable energy**
- **Robert J. Budnitz, Nuclear power: Status report and future prospects**
- **Hisham Khatib and Carmine Difiglio, Economics of nuclear and renewables**
- **Lara M. Pierpoint, Harnessing electricity storage for systems with intermittent sources of power: Policy and R&D needs**
- **Charles McCombie and Michael Jefferson, Renewable and nuclear electricity: Comparison of environmental impacts**
- **Jef Ongena and Yuichi Ogawa, Nuclear fusion: Status report and future prospects**