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# Country Report of China

LONG Maoxiong

China Nuclear Energy Association

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- 1 Nuclear Power Plants
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## Nuclear Power Plants in China



### -Operation

42 Units, 41770 MWe

### -Under construction

14 Units, 16310 MWe

### -Gen III/IV 11 units

- HPR1000: 4 units
- AP1000: 4 units
- EPR: 2 units
- HTGR: 1 unit

# Nuclear Reactor Technology Innovation

## Gen III



## Gen IV



# Application of Nuclear Technology in Agriculture

In last 60 years , irradiation technology has made remarkable contributions to the advancement of agricultural science and agricultural production in China

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## Mutation Breeding

- nearly 1/4 of the world

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## Agricultural Product Irradiation Processing

- annual irradiation > 200,000 tons

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## Nuclide tracer

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## Application of Nuclear Technology in industry

- ▶ X-ray non-destructive testing/CT
  - equipment manufacturing and operation
  - quality assurance
  - petrochemical
  - aerospace
  - nuclear energy
  - other industries

## Application of Nuclear Technology in life and health

- medical linear accelerators ~2000 units
- nuclear medical imaging - clinical diagnosis and treatment
- proton treatment
- heavy ion treatment
- high current proton cyclotron

## Application of Nuclear Technology in public security

- ▶ X-ray, gamma ray and neutron detection for large-scale container and vehicle inspection
  - aviation
  - railway
  - sea
  - road



## Application of Nuclear Technology in environmental protection

- electron beam irradiation - dyeing wastewater
  - 2000m<sup>3</sup> per day
- electron accelerator - industrial wastewater
  - close to industrialization
- electron beam irradiation - desulfurization and denitrification of emission gases in thermal power plant

感谢聆听 敬请指教

Thank you for your attention.

Questions?