

# **A Sustainable Energy Future & IAEA Support**

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“Towards the 2015 NPT Review Conference and beyond”

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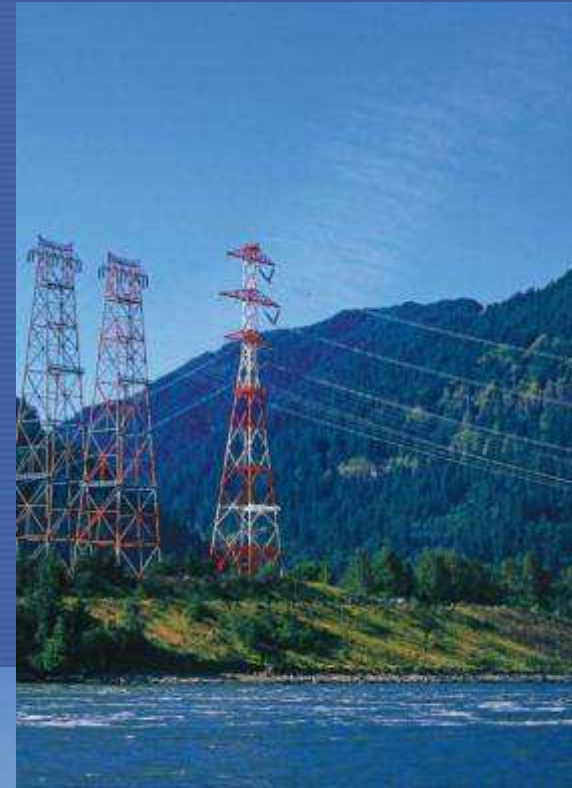
# Nuclear fuel cycle



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# IAEA Statute

**“...accelerate & enlarge  
contribution of atomic energy  
to peace, health and  
prosperity...”**





# SE4ALL



# Energy 2015

**2.6 B people**  
rely on biomass

**1.3 B people**  
no access to energy

**1 B people**  
no health care  
due to energy poverty

Earth at Night  
More information available at:  
<http://antwrp.gsfc.nasa.gov/apod/ap001127.html>

Astronomy Picture of the Day  
2000 November 27  
<http://antwrp.gsfc.nasa.gov/apod/astropix.html>



# Nuclear power reactors

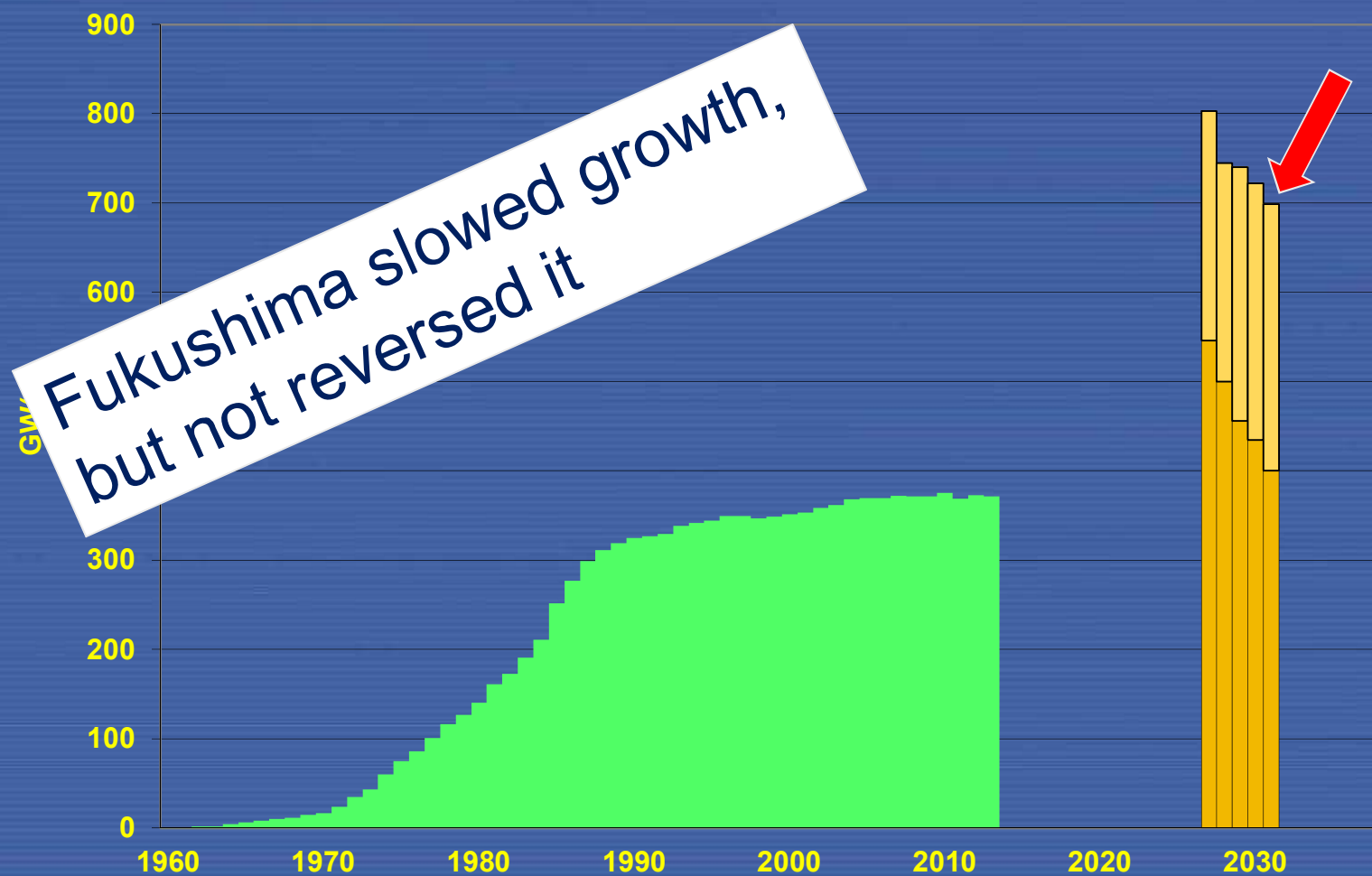
(23 February 2015)

**439 in operation = 11% of world electricity**



**69 under construction**

# Projections



IAEA

# International Ministerial Conference: Nuclear Power in the 21<sup>st</sup> Century



- Despite Fukushima, NP still an important option (energy security, fossil fuel prices, climate change)
- NP complements other sources, incl. renewables
- Interest in launching or expanding NP programmes



# Energy challenge



population  
life style  
energy demand



Anthropogenic  
Climate Change

# Climate Change



# Life cycle GHG emissions per kWh



**LOWEST**



# Integrated Services for developing Nuclear Power Programmes

**Energy planning:  
optimizes the mix**



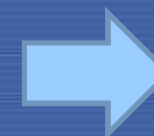
**Decide: Nuclear  
power an option?**

**Milestones: supports  
1st NPP project**



**Comprehensive,  
phased planning**

**Nuclear Energy  
Systems Assessment**



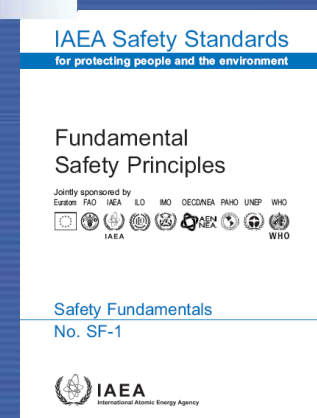
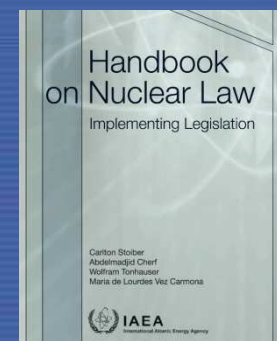
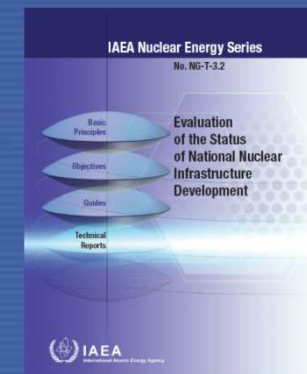
**Sustainable  
in long term?**

# IAEA services & products

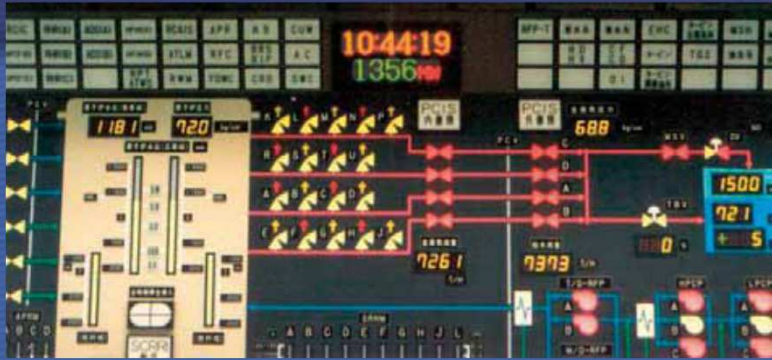
- Peer reviews
- Databanks
- Summaries of experience, new knowledge, best practices
- Training, e-learning
- Standards, guidelines
- Technical ref. documents
- Research coordination



Considerations to Launch a  
Nuclear Power Programme



# Support for operators



Instrumentation & control

Plant life management



maintenance/  
outage management

Fukushima lessons





# IAEA Action Plan on Nuclear Safety



*Safety  
Assessments*



*IAEA Peer  
Reviews*



*Emergency  
Preparedness  
and Response*



*National  
Regulatory  
Bodies*



*Operating  
Organizations*



*IAEA Safety  
Standards*



*International  
Legal  
Framework*



*Member States  
Embarking on  
Nuclear Power*



*Capacity  
Building*



*Protection from  
Ionizing  
Radiation*



*Communication*



*Research &  
Development*



***...atoms for peace  
at your service...***



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