



European  
Commission

# European Energy Union: nuclear energy and its safe use

Japan Atomic  
Industrial Forum  
Annual Conference

Tokyo, 14 April 2015

**Jonathan Hatwell**

Deputy Head  
EU Delegation to Japan

# Energy Challenges in the European Union:

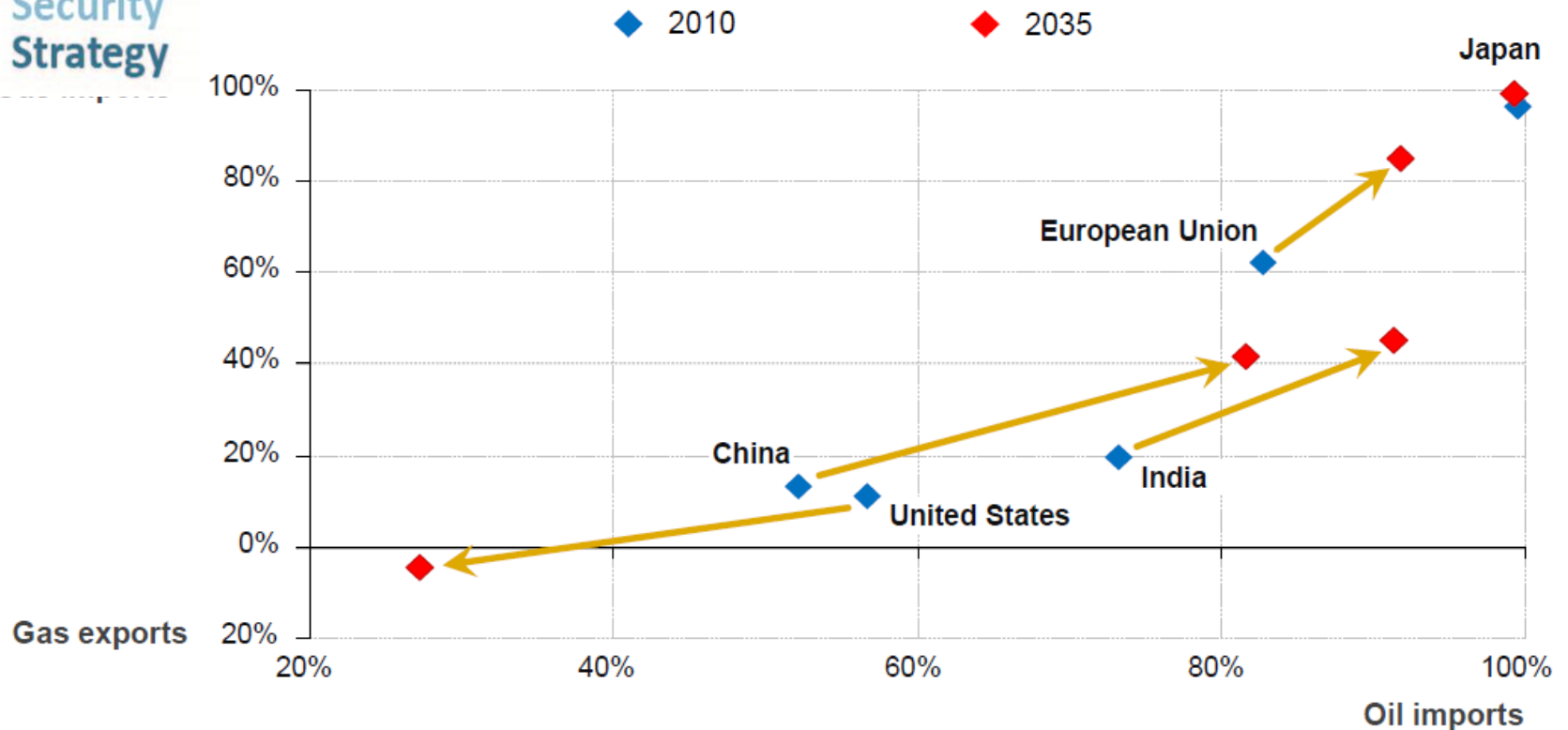
- *Europe relies too heavily on fuel and gas imports. We need to...*
- *Diversify our energy sources*
- *Reduce the high energy dependency*
- *Strengthen energy security*
- *Enhance energy efficiency*



European  
Commission

# EU energy dependence and the need for EU energy security strategy

European  
Energy  
Security  
Strategy



Source: IEA

# Climate and energy targets 2020–2050

2020

20%  
greenhouse  
gas reduction

20%  
renewable  
energy

20%  
energy  
savings

2030

40%  
greenhouse  
gas reduction

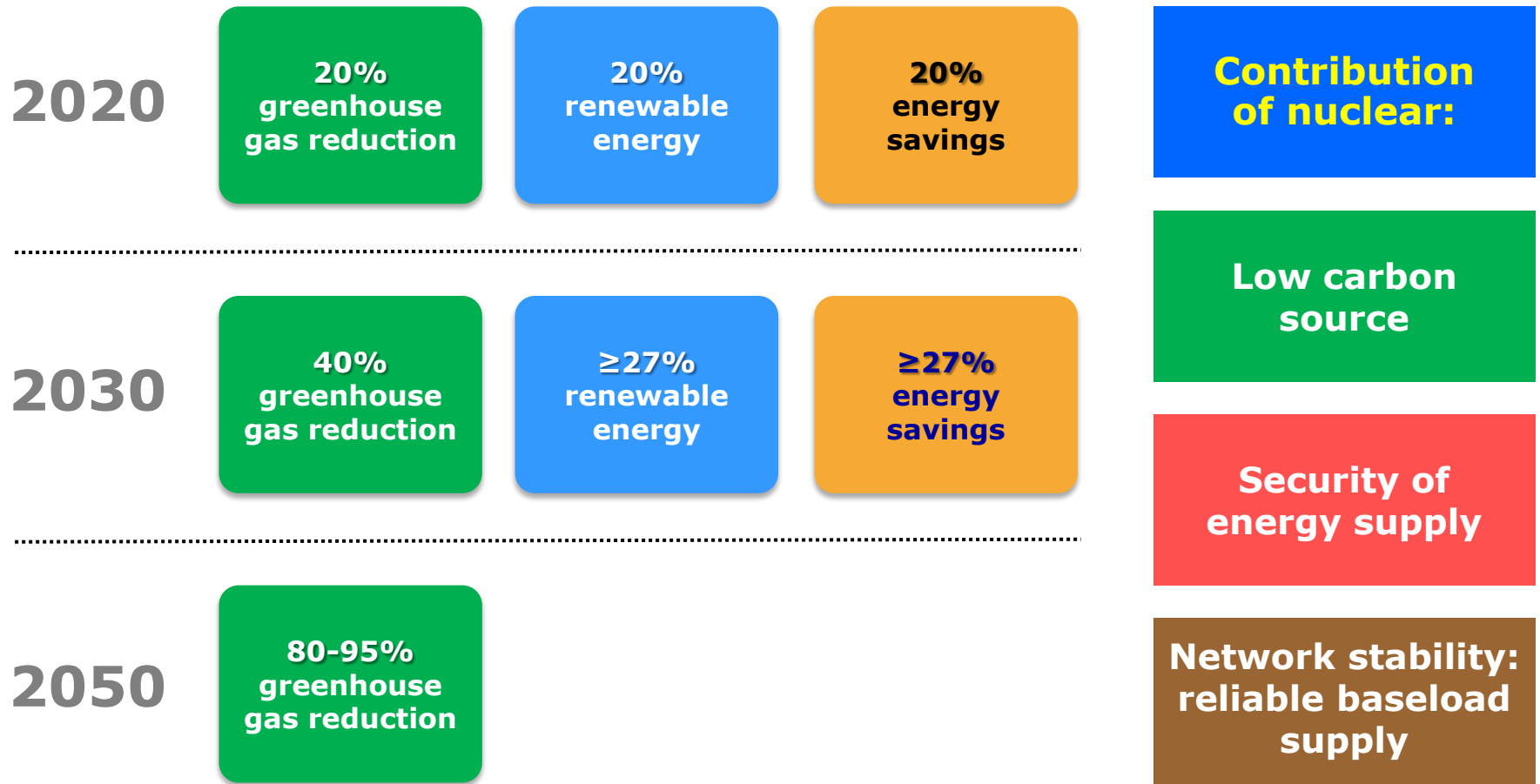
≥27%  
renewable  
energy

≥27%  
energy  
savings

2050

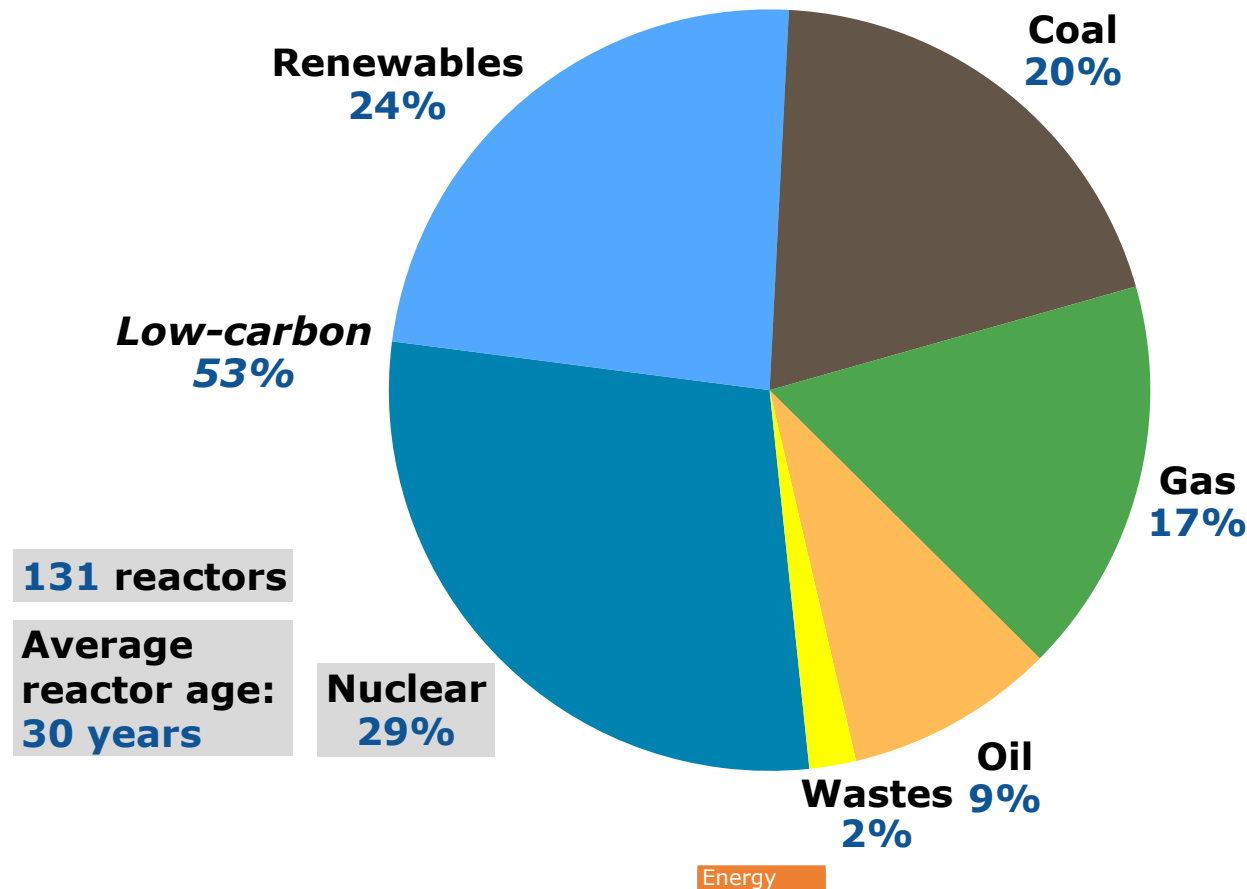
80-95%  
greenhouse  
gas reduction

# Climate and energy targets 2020–2050



# Nuclear power in the EU energy mix

## EU 28 *domestic production* of energy in 2013



## EU Commission President Jean Claude Juncker (2014):

*"...I therefore want to **reform and reorganise Europe's energy policy into a new European Energy Union**. We need to pool our resources, **combine our infrastructures** and unite our negotiating power... I want the EU to **lead the fight against global warming** ahead of the UN Paris meeting in 2015 and beyond. We owe this to future generations."*

# EU's vision of an Energy Union

1.

True **solidarity and trust**;  
speaking with **one voice** in global affairs

2.

An **integrated**, continent-wide energy system

3.

Sustainable, **low-carbon** and climate-friendly economy

4.

Strong, innovative and **competitive** European economy

5.

**Citizens** taking ownership of the energy transition



# 1 Energy Security, solidarity and trust



We have to **diversify** energy supply

This means an increased variety of sources, suppliers and routes; increasing transparency on gas supply; working together on security of supply and developing a stronger European role in global energy markets.

## 2 A fully-integrated internal energy market

**Energy should flow freely** across  
the EU – without any technical  
or regulatory barriers

This means connecting markets through interconnections and implementing and upgrading the internal market's software while enhancing regional cooperation and empowering consumers.

## 3 Energy efficiency



**Rethink energy efficiency** as an energy source in its own right

This means increasing energy efficiency, in particular in the building sector, and promoting an energy-efficient and decarbonized transport sector as well as efficient products.

## 4 Decarbonisation of the Economy



An **ambitious climate policy** is an integral part of our Energy Union

The next challenge will be to enforce the 2030 energy and climate framework, while becoming the number one in renewables.

# 5 Research, innovation And competitiveness



## Developing EU **technological leadership** in low carbon technologies

This will reduce energy consumption, empower consumers, create huge industrial opportunities and boost growth and jobs.



# What role for nuclear in the Energy Union?

**Nuclear: Reliable baseload generation and carbon emission-free source**

Nuclear energy plays an important role in those Member States that choose to use it. It enhances the security of supply, and fosters decarbonisation of the energy mix.

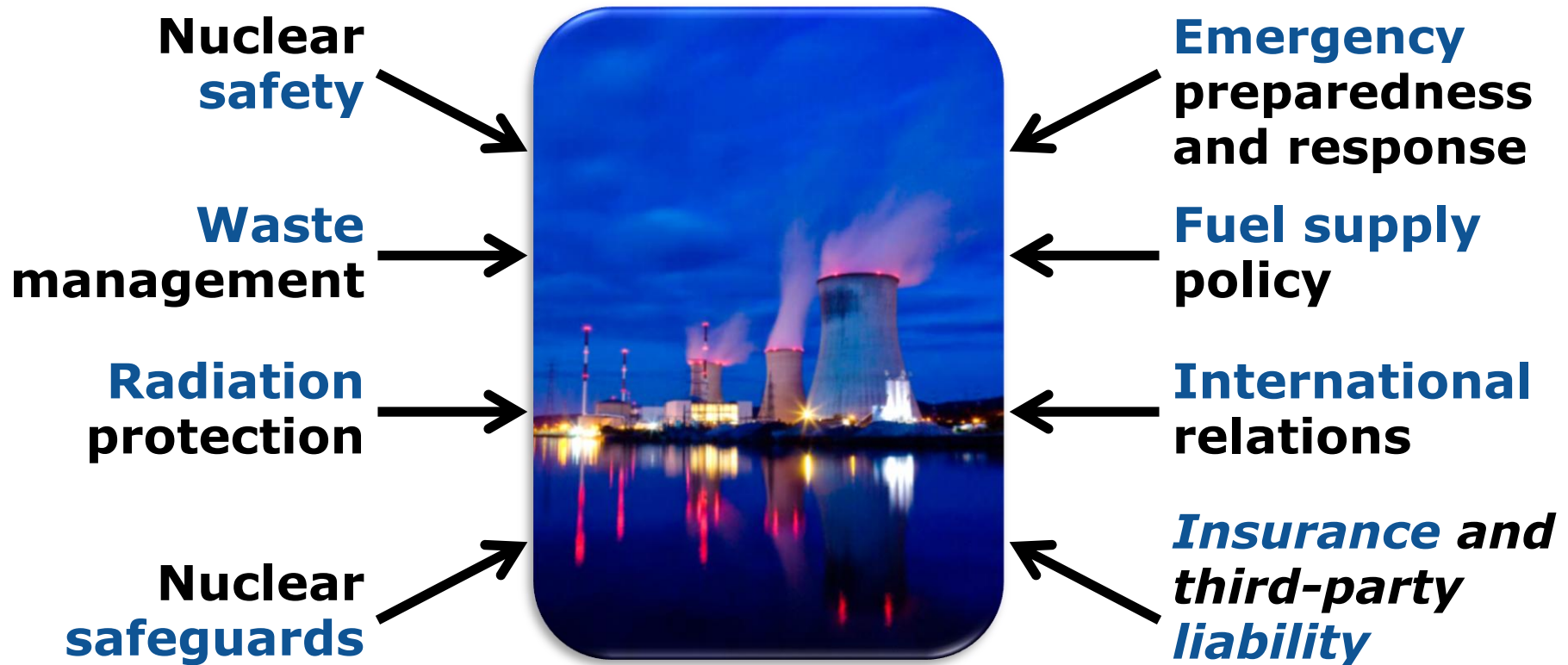




**The initial 3 Communities**  
**Three founding treaties, establishing:**  
**European Coal and Steel Community**  
**(1951–2002)**  
**European Economic Community**  
**(1957)**  
**European Atomic Energy Community**  
**(1957)**



# Euratom Treaty competences





# Safety: stress tests

- **European Council mandate (March 2011)**
- **Participation:**
  - ❖ **all 14 EU MSs** with NPPs
  - ❖ **Lithuania, Switzerland, Ukraine**
- **All reactors in the EU safe to operate**
- **Some shortcomings and many possible improvements identified**

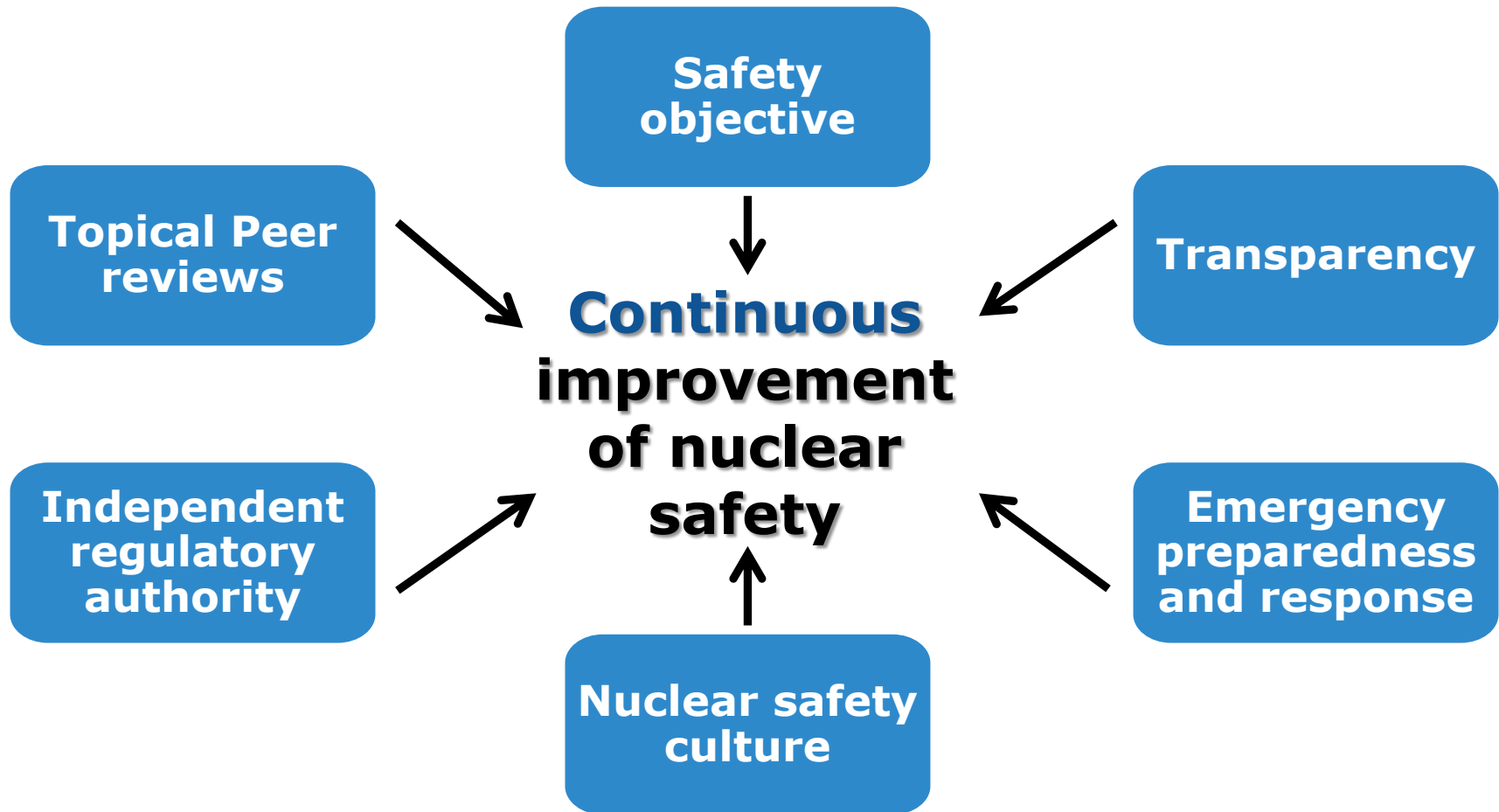


## Stress tests: follow-up

- **Implementation of recommendations: national responsibility**
- **ENSREG action plan: July 2012**
- **National action plans: end 2012**
- **Peer review of National action plans – 1<sup>st</sup> workshop: April 2013**
- **Peer review of National action plans – 2<sup>nd</sup> workshop: April 2015**
- **Commission report on the implementation: 2<sup>nd</sup> half of 2015**

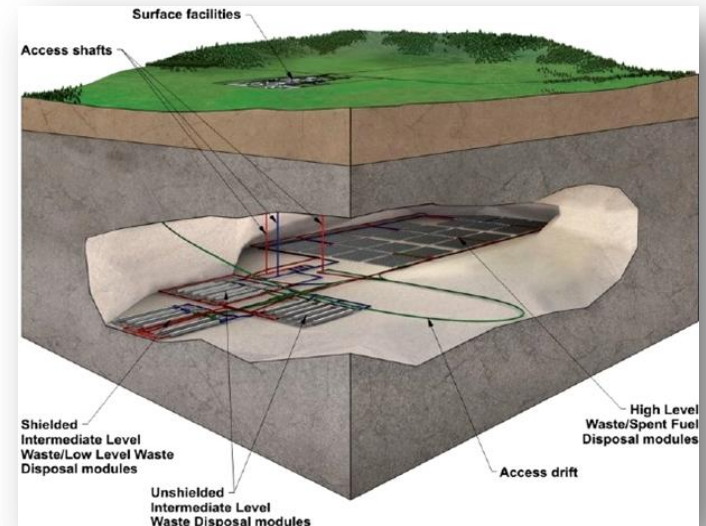


# Nuclear Safety Directive (2009 & 2014)

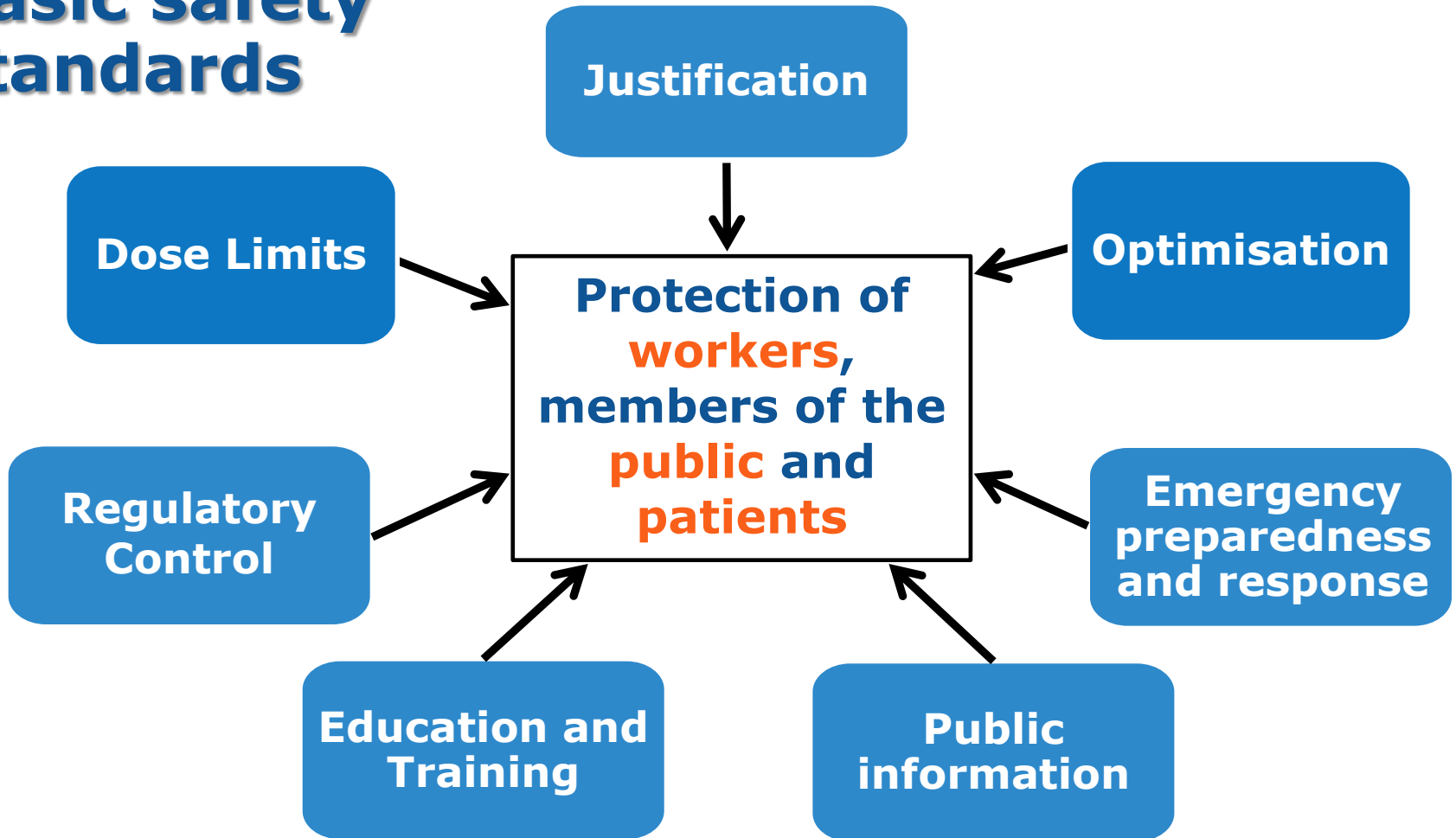


# Radioactive Waste Directive (2011)

- Legally binding and enforceable standards for managing radioactive waste and spent fuel
- By August 2015: National programmes
- Strict control of exports of spent fuel and radioactive waste (outside EU)



# Euratom basic safety standards





# International

- **Cooperation with the IAEA:**
  - ✓ **Joint Euratom/IAEA safeguards inspections in the EU**
  - ✓ **implementing Memorandum of Understanding on nuclear safety cooperation (signed in 2014)**
  - ✓ **reinforcing the Convention on Nuclear Safety: the Commission and the EU Member States are key players**
  - ✓ **strengthening the implementation of the Joint Convention on spent fuel & waste**
- **Cooperation with third countries on the follow-up of stress tests**



## Priority initiatives

- **PINC (Illustrative Nuclear Programme for the Community): economics, investments...**
- **Security of supply:**
  - **Notifications and assessments of nuclear investment projects**
  - **Diversification of fuel supply**
- ❖ **These initiatives fit into the Energy Union strategy**



## Conclusions...

- **The EU has committed to an Energy Union whose priorities are:**
- **Energy security, competitiveness, and low-carbon – emphasizing the role of renewables**
- **Nuclear will continue to have key role in the EU**
- **The revision of the EU nuclear framework secures the foundations for safe development of nuclear in those Member States that wish to use it**



# Conclusions...

- **Energy and climate challenges are global issues**
- **The EU-Japan summits highlighted value of closer collaboration on energy topics including nuclear**