



# The Future of Nuclear Energy: Nuclear Safety and Security

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M17-510

# Glossary

NPP

# Glossary

NPP - nuclear power plant

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АЭС - атомная электростанция

# Glossary

IAEA

# Glossary

IAEA - International Atomic Energy Agency

# Glossary

IAEA - International Atomic Energy Agency

МАГАТЭ - Международное агентство по  
атомной энергии

# Glossary

WWER or VVER



# Glossary

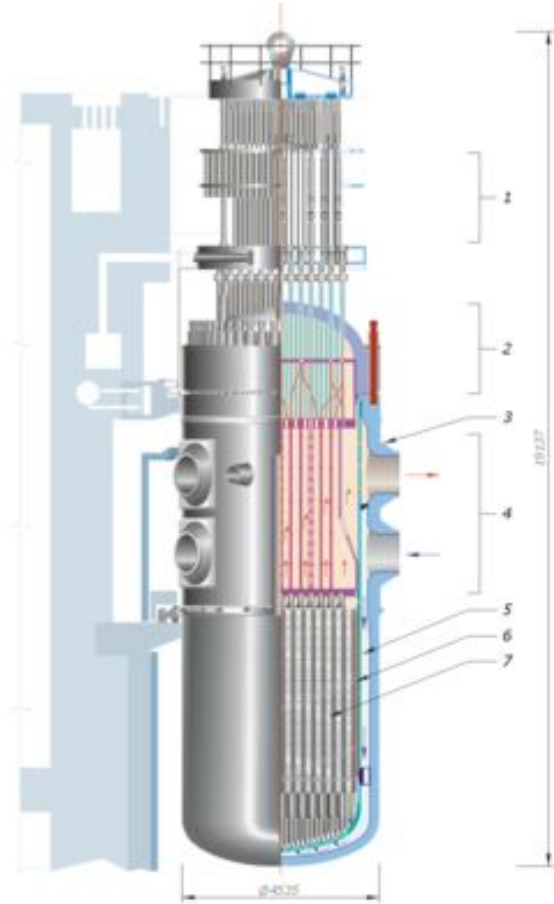
WWER or VVER - water-water energetic reactor.  
They are the basis of the world's peaceful nuclear  
energy

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Водо-водяной энергетический реактор (ВВЭР)

# Glossary



# Glossary

RBMK - High Power Channel-type Reactor

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Реактор большой мощности канальный (РБМК)

# Glossary



Reactor cover

# Glossary

in other countries VVER called  
PWR (AP)

# Glossary

in other countries VVER called  
PWR - pressurized water reactor

Водяной реактор под давлением



# Glossary

Safety and security

# Glossary

Safety and security - the condition of being protected from or unlikely to cause danger, risk

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Безопасность и физическая защита

# Glossary

Awareness (syn.: understanding, recognition)

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Awareness (syn.: understanding, recognition) -  
knowledge or perception of a situation or fact

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Осознание

# Glossary

Sentiment (syn.: emotion, feeling)

# Glossary

Sentiment (syn.: emotion, feeling) - a feeling or emotion



# Glossary

Sentiment (syn.: emotion, feeling) - a feeling or emotion

Настроение

# Glossary

To hinder (syn.: prevent, delay)

# Glossary

To hinder (syn.: prevent, delay) - create difficulties  
for (the expansion of nuclear power)

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Мешать

# Glossary

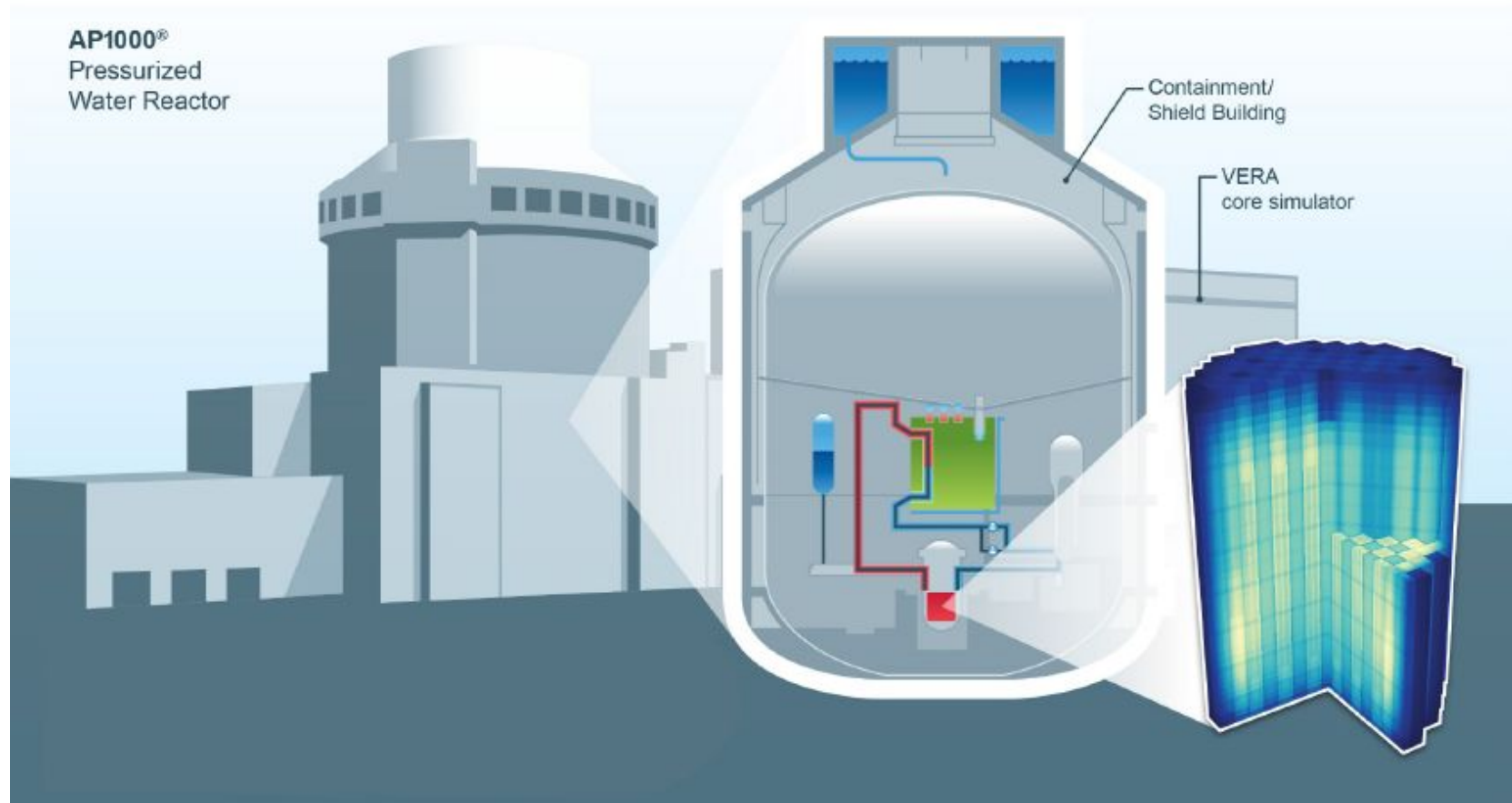
Containment - the action of keeping something harmful under control or within limits

# Glossary

Containment - the action of keeping something harmful under control or within limits

Защитная оболочка, гермооболочка

# Glossary



# Glossary

Proliferation (syn.: spread)



# Glossary

Proliferation (syn.: spread) - rapid increase in numbers

# Glossary

Proliferation (syn.: spread) - rapid increase in numbers

Распространение

# Glossary

Missile (syn.: rocket)

# Glossary

Missile (syn.: rocket) - an object that is forcibly propelled at a target, either by hand or from a mechanical weapon

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Ракета

# Glossary

Abandoned (syn.: deserted, unused)

# Glossary

Abandoned (syn.: deserted, unused) - having been deserted or cast off

# Glossary

Abandoned (syn.: deserted, unused) - having  
been deserted or cast off

Заброшенный



# Glossary

Site (syn.: place, position, locate)

# Glossary

Site (syn.: place, position, locate) - an area of ground on which a town, building, or monument is constructed

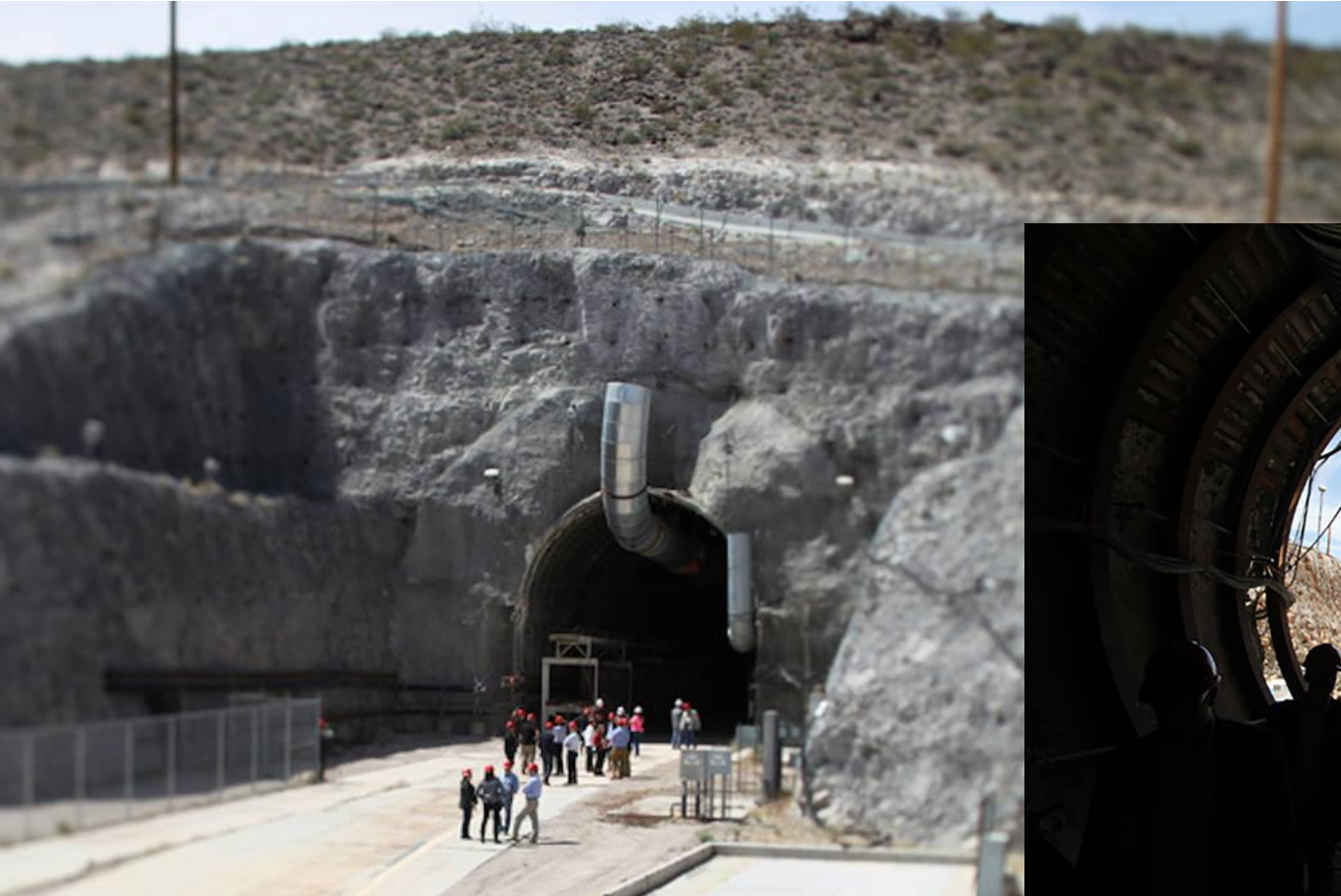
# Glossary

Site (syn.: place, position, locate) - an area of ground on which a town, building, or monument is constructed

Хранилище, склад

# Glossary

*Yucca Mountain nuclear waste site or repository*



# Glossary

Confront (syn.: challenge, trouble)

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Confront (syn.: challenge, trouble) - meet (someone) face to face with hostile or argumentative intent

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Противостоять

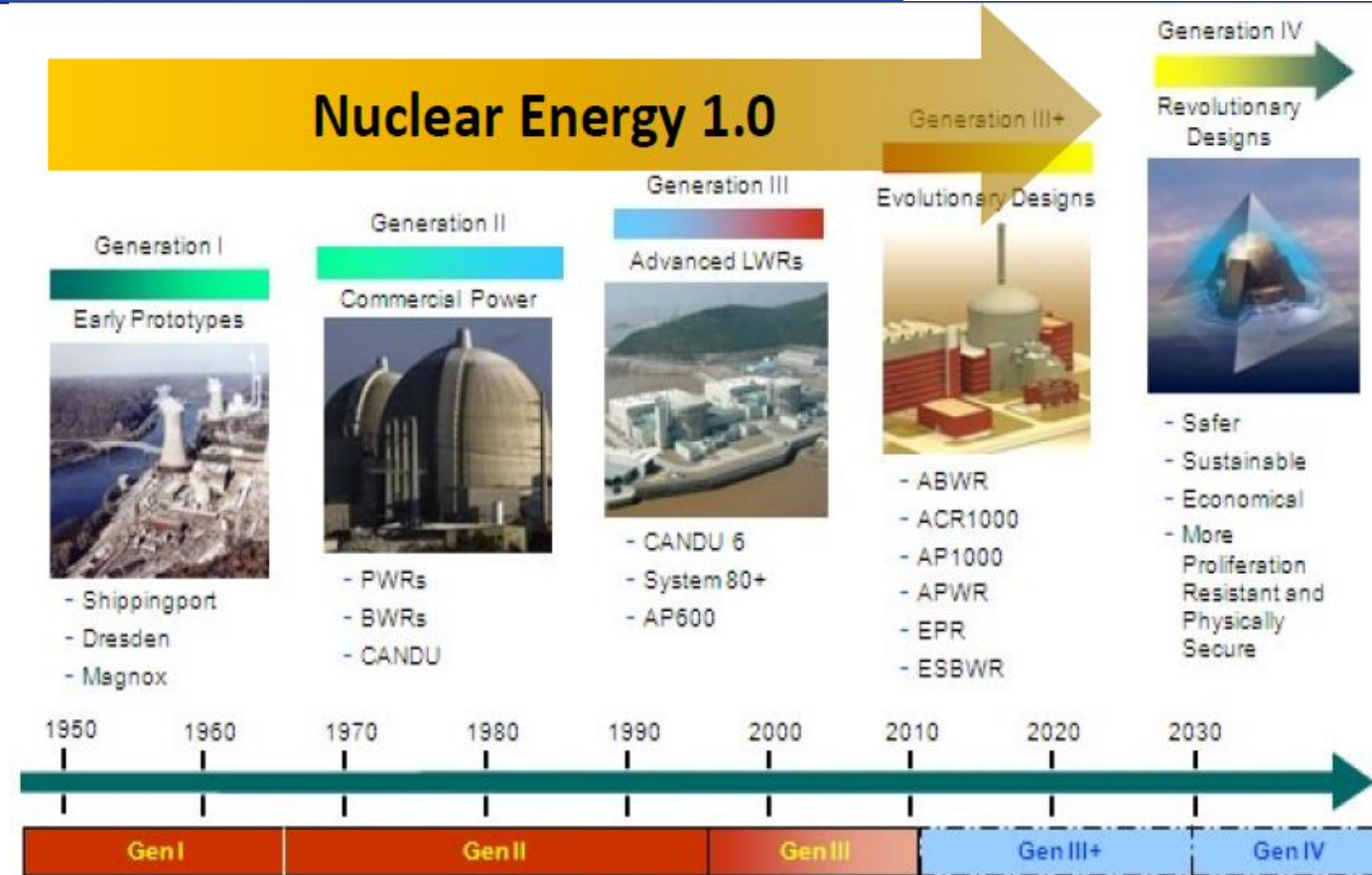
# Questions

Problems: Rising Costs, Safety and Security Concerns

Conventional Solutions: Create Costs and Safety Dilemma

Approaches: Rethink Safety Goals and Design Principles

Nuclear 2.0: Fundamentally Safe and Manufactured Systems





# Questions

Who were the authors of the article?

# Questions

At which NPPs did 3 major accidents occur?

# Questions

What type of a reactor stopped to construct in Russia after Chernobyl?

# Questions

When was accident on Three Mile Island?

# Questions

What happened on Three Mile Island?

# Questions

What country refused from Nuclear energy program in 1970s?

# Questions

What type of the reactor is more safety?  
(RBMK or VVER)

# Questions

When did the USA stop the construction of the  
their NPPs in the USA?



# Questions

What are the main differences of RBMK and VVER?

# Questions

Thank you!