The 17th INPRO Dialogue Forum on Opportunities and Challenges in Small Modular Reactors

Opportunities and Challenges

Lotte Hotel, Ulsan, Republic of Korea
2-5 July, 2019
Opportunities

1. Climate Change
2. Safety
3. Simplicity
4. Flexible Application
5. Capital Cost
6. Flexible Deployment

Challenges

1. Policies
2. Licensing
3. Security & Safeguards
4. Implementation
5. LCOE
Opportunities

Climate Change

Clean Energy

Decarbonization
Opportunities

Safety

Passive System

Small EPZ

Margin for Load Follow

Plug-and-Play
Opportunities

Simplicity

Integral Design

Fabrication in Shop

Smaller Supply Chain

Localization

Standardization
Flexible Application

Hybrid with Renewables

Non-electric User

Scalability

Adaptability
Opportunities

Capital Cost

Smaller Investment

Faster Construction
Opportunities

**Flexible Deployment**

Transportation

Small Grid

Siting (Smaller / Close to End User)
Challenges

Policies

Terms of Government

SMR / Nuclear as Clean Energy Source

Public Acceptance
Challenges

Licensing

Proof of New Technology

Demonstration & Tests

Multiple Unit in One Site

Differences between States
Challenges

Security & Safeguards

- Physical Protects
- New Accounting System
- Remote Area or Marine
- New Fuel Types
Implementation

Challenges

- FOAK
- Complex Engineering
- Time Window Shortening
- Protect Management
- Reference Plant
Challenges

LCOE

Slow market

Embarking State with Low LCOE

Decreasing Gas Price

How to Attract Private Funding