

KEPCO E&C's R&D for SMR

- 17th INPRO Dialogue Forum on Opportunities and Challenges in SMRs -

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Byung Jin Lee

NSSS Design & Development Division

KEPCO E&C



Our SMR ... NOT Wants to Compete with Large Ones

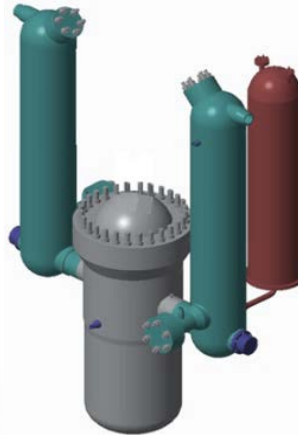
Aiming for Diverse and Multi-purpose Applications

Power (MWe)		Applications	Remarks
Large	> 700	✓ Power supply for big electrical grids	Electric power market
Medium	300 ~ 700	<ul style="list-style-type: none"> ✓ Power supply for smaller electrical grid (small or developing countries) ✓ Replacement of old fossil power plants 	
	200 ~ 300	✓ Similar to those of medium reactors	
Small	25 ~ 200	<ul style="list-style-type: none"> ✓ Local power & heating ✓ Industrial process heat 	Niche market
	10 ~ 25	✓ Nuclear power battery	

Our SMR will Make Differences

Collaboration with Other Technologies

- **Convergence with Shipbuilding & Marine Industry**
- **Hybrid with Renewables - Solar and Wind Power**



Near- & Long-term Strategy for Our SMR



Reactor System Design

Development of Key Element Technologies

1st Phase :
▪ Standard Design of **Block-type SMR**

2nd Phase :
▪ Standard Design of **Integral-type SMR**

3rd Phase :
▪ **Choose SMR type for detailed design** depending on market demands



- ✓ **Advanced Technologies**
 - In-Vessel CEDM
 - Top-mounted ICI
 - Boron-free operation
 - Load following operation
 - Long-term refueling
 - Natural circulation
 - Compact SG
 - Canned-motor RCP ...
- ✓ **Expert consultations**
- ✓ **Validation**

Thank You!

