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# **Working Group 4 Generation and Storage Risks to Successful IRDAs**

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# Context

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- **Deployment of new technology to integrate generation and storage involves several actors**
  - Generation/storage promoters
  - System operator
  - Technology researchers and developers
- **System operator's role deals with**
  - Meeting reasonable demands for transmission
  - Contributing to security of supply
  - Managing energy flows
  - Providing information
  - Ensuring non-discrimination



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# Types of risk

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## **Technical risk**

- Project may not perform as expected

## **Reliability risk**

- Project may adversely affect power system reliability

## **Benefit risk**

- Benefits of project may be too small to be observed



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# Technical Risk

- Not particularly related to SmartGrids
- Research proposal must be sufficiently well developed prior to the demonstration phase



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# Reliability risk

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- System operators' primary focus is reliability
- They tend to be conservative
- System reliability risks must be fully assessed
- Appropriate risk management strategies must form an integral part of the action



# Benefit Risk

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- The scale of the installation must be such that the benefits are measurable.**
  - A kW-sized installation is unlikely to be able to demonstrate measurable benefits to a transmission system operator
- All the associated control and communications systems must be included in the demonstration**
- Sufficient analysis work must be carried out in advance to estimate all the benefits to be demonstrated**



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# Keys to Success

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- Fully developed concept**
  - Including control and communications systems
- Full assessment of reliability risks**
  - Engagement with host system operator
- Comprehensive analysis to predict impact**
- Monitoring plan agreed**



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**Thank you for your attention!**

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