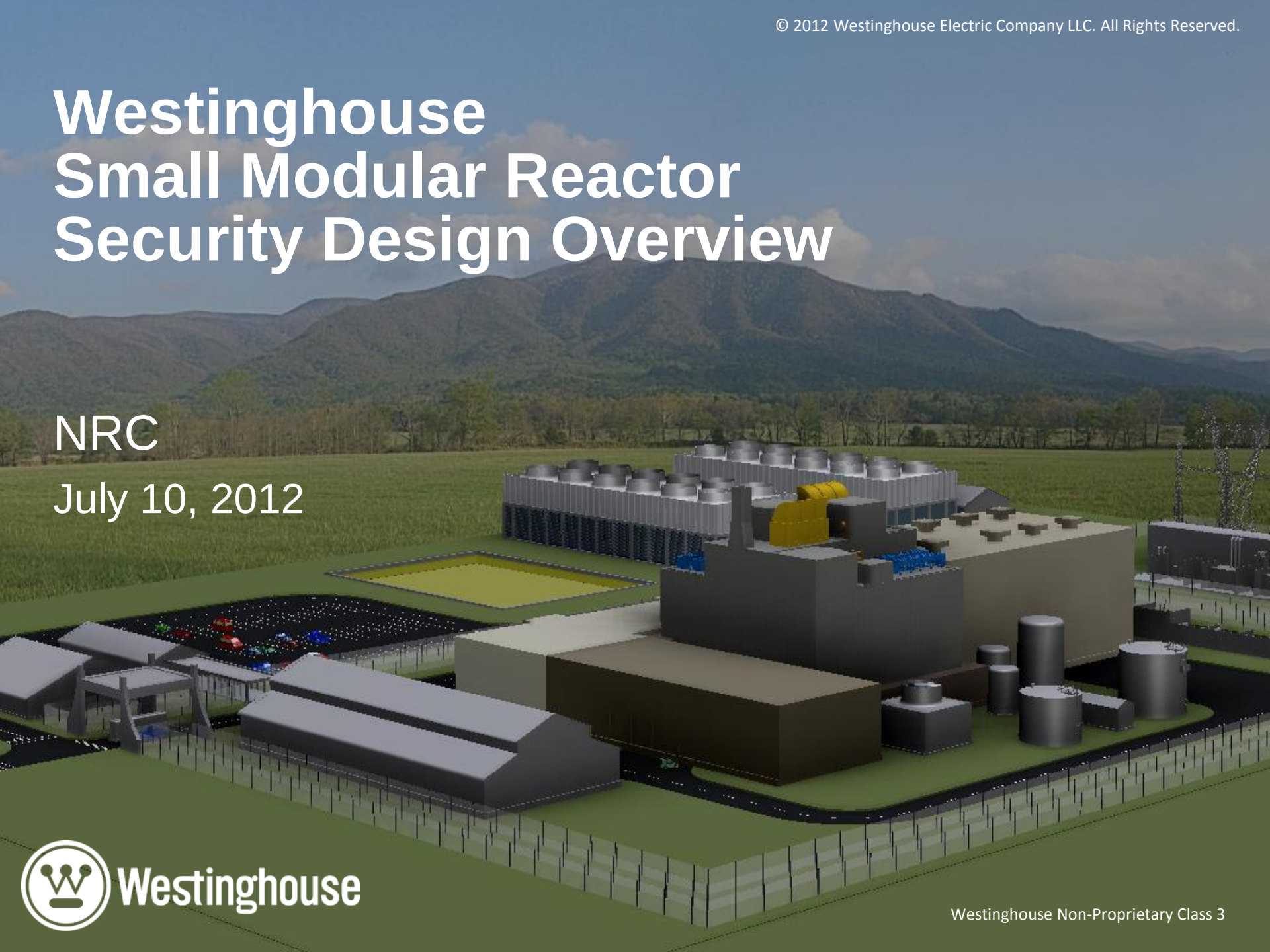
Westinghouse Small Modular Reactor Security Design Overview

NRC

July 10, 2012



Westinghouse

AP1000® Security Overview

John Kostelnik

Michael Sleigh, PE

Asset Protection and Compliance

Asset Protection and Compliance

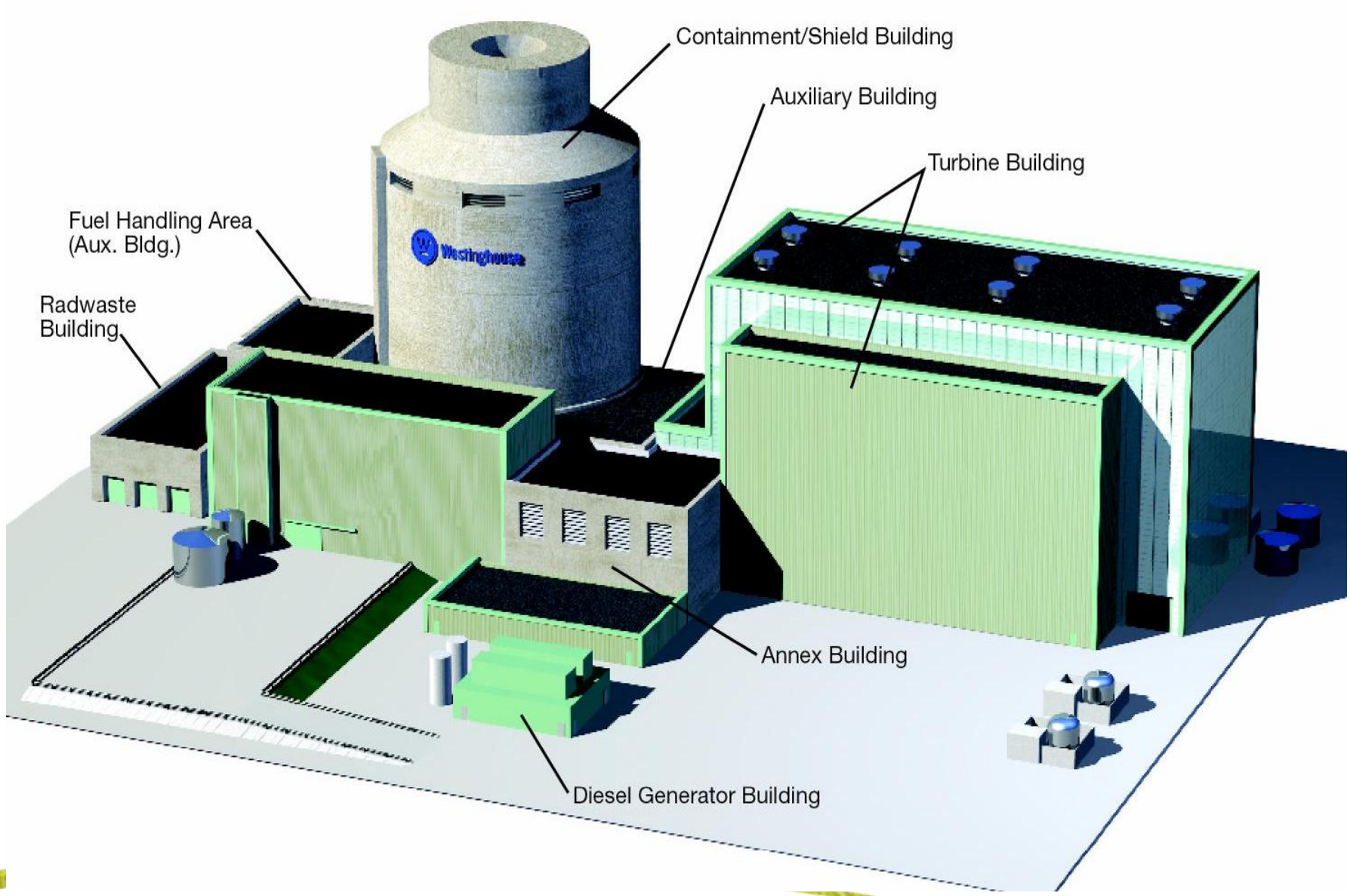
- Group Overview
  - **AP1000®** Design Expertise
    - Security Threat Assessment
    - Aircraft Impact
    - Loss of Large Area
    - Risk Assessment (Target Sets)
  - Security Training/Certifications
  - Site Experience:
    - Security Management
    - Development of Target Sets and Protective Strategies
    - Security System Installation and Support
    - Overall Plant Operations

Asset Protection and Compliance

- Thorough understanding of 73.55 rule requirements and of RG's 5.76 and 5.69 and other key rule areas including:
  - Fitness for Duty and Work Hours
  - Cyber Security
  - Safety-Security Interface
  - Large Area Fires
  - Aircraft Impact
  - Design Basis Threat

Asset Protection and Compliance

- Thorough understanding of performance requirements including the Force on Force program:
  - NRC Requirements
  - Significant Changes in the Program
  - Expectations for Licensees
  - MILES and other Equipment Issues
  - Detailed Level of Control Required
  - Adversary Team Operations
    - Weapons, Explosives, Tactics, etc.



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AP1000® Security System (SES)

- Generally Described in APP-SES-E8-001, Plant Security System, System Specification Document
- More than a Dozen Functional Specifications and Calculations
- Hundreds of Drawings
- Threat Assessment (APP-GW-GLR-066)
  - Staffing
  - Target Sets

Key Attributes

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Key Attributes

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Questions?

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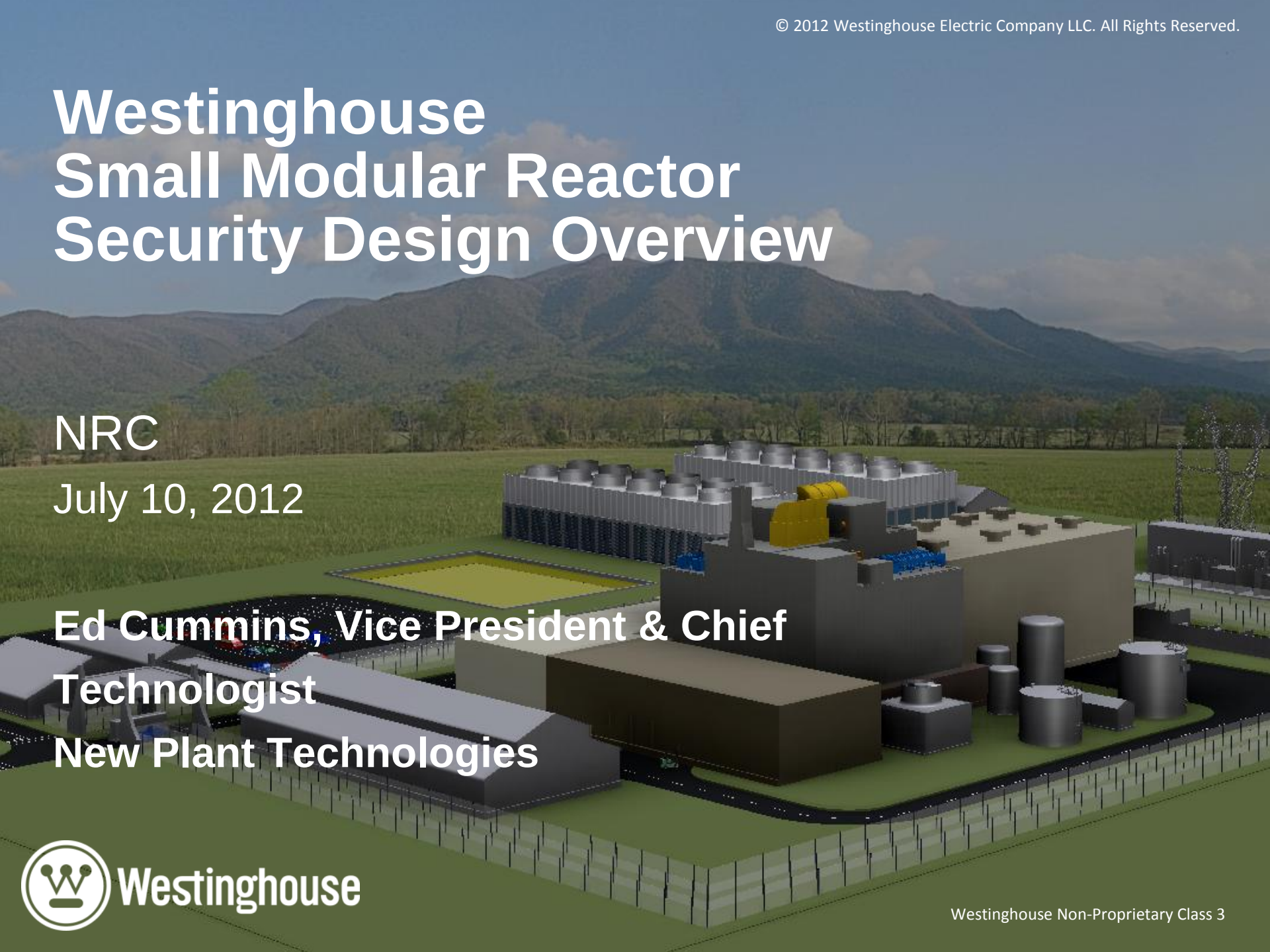
July 10, 2012

Ed Cummins, Vice President & Chief Technologist

New Plant Technologies



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SMR Plant/Site Layout

Site Layout – General Characteristics

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Site Layout – General Characteristics

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Site Layout – Unit Separation

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Building Layout – General Characteristics

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Nuclear Island Layout

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SMR Plant Layout

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SMR Plant Layout
Containment Vessel

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Level 1: Radiological Controlled Area

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Level 2: Radiological Controlled Area

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Level 3: Safety Train IDS & Spent Fuel

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Level 4: Safety Train I&C&E, and Spent Fuel

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Level 5: Safety Trains & Refuel Area

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Level 6

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Level 7: Grade – HVAC, CCS

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Level 7: Grade – Access Routes

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Level 8: Nuclear Island Access

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Level 8: Access Routes

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Level 9

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Level 10: Nuclear Island – VAS AHU

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Level 11: Roof

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Thank You