

# Duke Energy Nuclear Programs Update for the South Carolina Governor's Nuclear Advisory Council

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\*One Team, One Fleet, One Company"

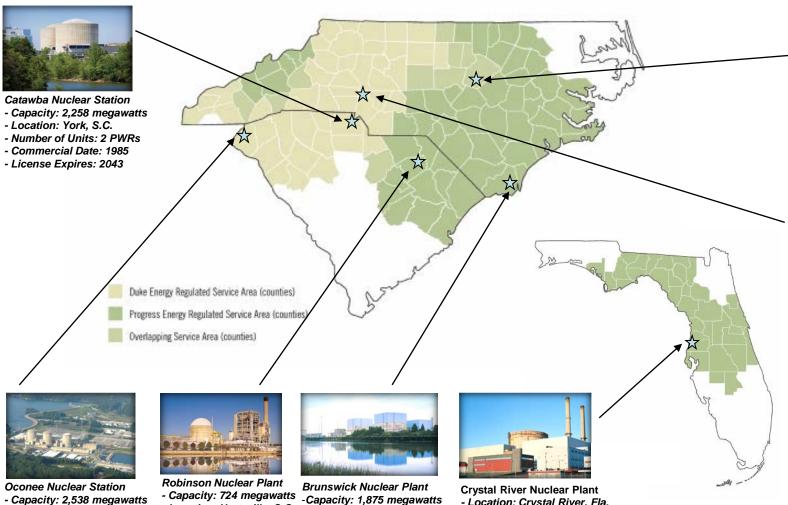
October 10, 2013

## **Agenda**

- Nuclear Fleet Overview
  - Operating
  - New
  - Decommissioning
- 2012 Performance
- Nuclear Leadership
- 2013 Initiatives



## **Current Nuclear Fleet**





Harris Nuclear Plant - Capacity: 930 megawatts - Location: New Hill. N.C. - Number of Units: 1 PWR - Commercial Date: 1987 - License Expires: 2046



McGuire Nuclear Station - Capacity: 2,200 megawatts - Location: Huntersville, N.C. - Number of Units: 2 PWRs - Commercial Date: 1981 - License Expires: 2041, 2043

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- Location: Seneca, S.C.
- Number of Units: 3 PWRs
- Commercial Date: 1973 - License Expires: 2033, 2034
- Location: Hartsville, S.C.
- Number of Units: 1 PWR
- Commercial Date: 1971
  - License Expires: 2030

-Capacity: 1,875 megawatts

- Location: Southport, N.C.
- Number of Units: 2 BWRs
- Commercial Date: 1975
- License Expires: 2036, 2034
- Location: Crystal River, Fla.
- Number of Units: 1 PWR
- Retirement announced 2/5/13



#### **New Plants**

- Maintain new nuclear as an option for future capacity
  - Combined construction and operating license applications
    - Lee (two AP1000 units near Gaffney, South Carolina)
    - Levy (two AP1000 units in Levy County, Florida)
  - Suspended application review for Harris Nuclear Plant Units 2 and 3
  - Exploring regional generation partnership opportunities
- Licensing challenges
  - Waste Confidence
  - Central and Eastern United States seismic impacts

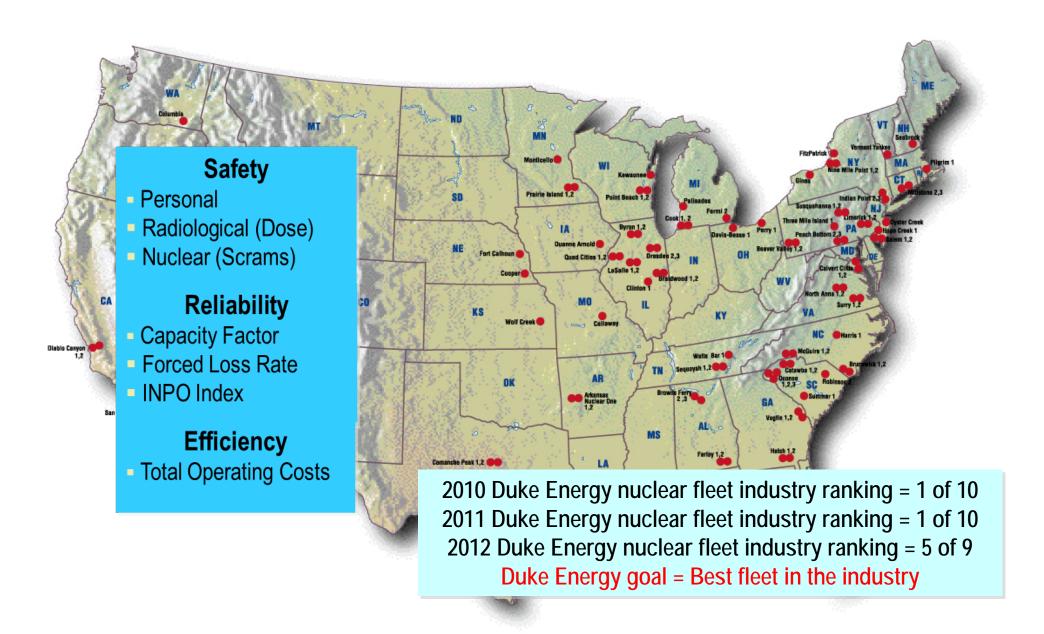


## **Crystal River Unit 3**

- Delamination of concrete in a sector of the containment shield building in 2009 during steam generator replacement activities
  - Damage repaired but subsequent delaminations occurred in two other sectors in 2011
  - February 2013 decision to retire unit rather than repair it
- Plant will be maintained in SAFSTOR until decommissioning



## **Nuclear Fleet – Key Performance Indicators**

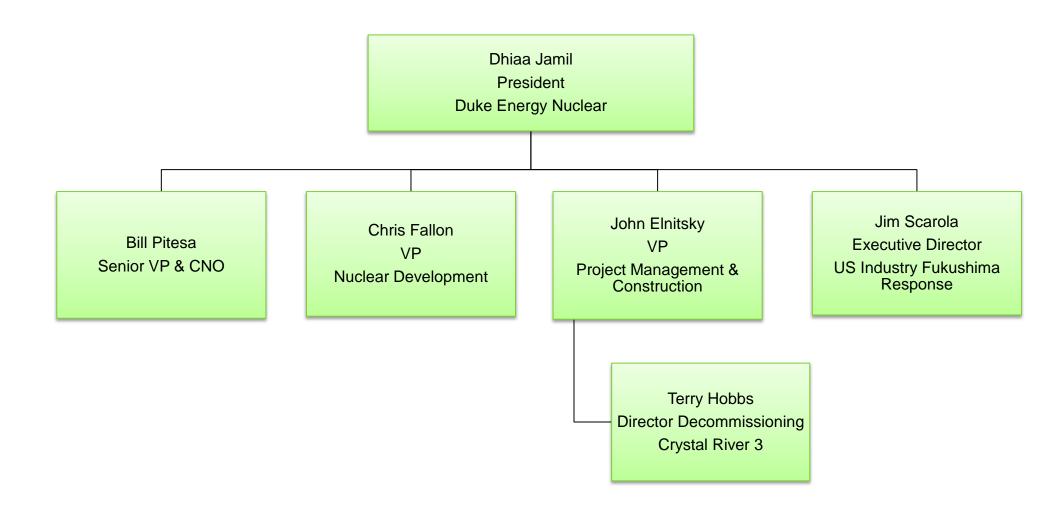


## **2012 Generation Highlights**

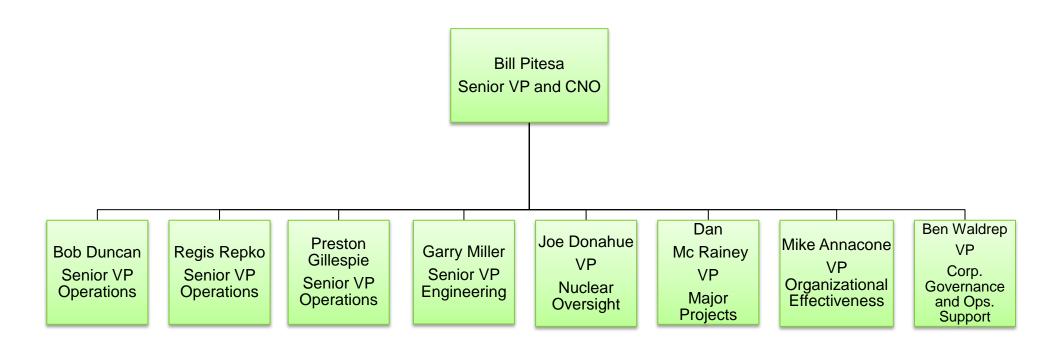
- Fleet capacity factor of 90.35 percent
  - 14<sup>th</sup> year of fleet capacity factor greater than 90 percent (excluding Crystal River 3 in 2010-2012)
  - Exceeded U.S. industry average for past 12 years
- Harris completed first ever breaker-to-breaker run in Spring 2012 (525 days)
- Brunswick Unit 2 set annual net generation record of 7,987,810 megawatt-hours
- McGuire Unit 2 completed a 528 day breaker-to-breaker run in Fall 2012 (best ever for station)



# **Nuclear Leadership**



# **Nuclear Leadership**



## **2013 Fleet Initiatives**

- Fleet Excellence
  - Outage execution
  - Regulatory excellence
  - Engineering technical rigor
  - Organizational effectiveness excellence
  - Major Projects excellence
- Fleet Integration
  - Fleet process and organizational alignment
  - Asset suite implementation

