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

Steve Nesbit
Director, Nuclear Policy and Support

October 10, 2013

For Information Purposes Only

“One Team, One Fleet, One Company”
Agenda

• Nuclear Fleet Overview
  ▪ Operating
  ▪ New
  ▪ Decommissioning

• 2012 Performance

• Nuclear Leadership

• 2013 Initiatives
Current Nuclear Fleet

Catawba Nuclear Station
- Capacity: 2,258 megawatts
- Location: York, S.C.
- Number of Units: 2 BWRs
- Commercial Date: 1985
- License Expires: 2043

Brunswick Nuclear Plant
- Capacity: 1,875 megawatts
- Location: Southport, N.C.
- Number of Units: 2 BWRs
- Commercial Date: 1975
- License Expires: 2036, 2034

Oconee Nuclear Station
- Capacity: 2,538 megawatts
- Location: Seneca, S.C.
- Number of Units: 3 PWRs
- Commercial Date: 1973
- License Expires: 2033, 2034

Robinson Nuclear Plant
- Capacity: 724 megawatts
- Location: Hartsville, S.C.
- Number of Units: 1 PWR
- Commercial Date: 1971
- License Expires: 2030

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

Catawba Nuclear Station
- Capacity: 2,258 megawatts
- Location: York, S.C.
- Number of Units: 2 BWRs
- Commercial Date: 1985
- License Expires: 2043

Brunswick Nuclear Plant
- Capacity: 1,875 megawatts
- Location: Southport, N.C.
- Number of Units: 2 BWRs
- Commercial Date: 1975
- License Expires: 2036, 2034

Crystal River Nuclear Plant
- 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

Safety
- Personal
- Radiological (Dose)
- Nuclear (Scrams)

Reliability
- Capacity Factor
- Forced Loss Rate
- INPO Index

Efficiency
- Total Operating Costs

2010 Duke Energy nuclear fleet industry ranking = 1 of 10
2011 Duke Energy nuclear fleet industry ranking = 1 of 10
2012 Duke Energy nuclear fleet industry ranking = 5 of 9

Duke Energy goal = Best fleet in the industry
2012 Generation Highlights

- Fleet capacity factor of 90.35 percent
  - 14th 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

Dhiaa Jamil
President
Duke Energy Nuclear

Bill Pitesa
Senior VP & CNO

Chris Fallon
VP
Nuclear Development

John Elnitsky
VP
Project Management & Construction

Terry Hobbs
Director Decommissioning
Crystal River 3

Jim Scarola
Executive Director
US Industry Fukushima Response
Nuclear Leadership

Bill Pitesa
Senior VP and CNO

Bob Duncan
Senior VP Operations

Regis Repko
Senior VP Operations

Preston Gillespie
Senior VP Operations

Garry Miller
Senior VP Engineering

Joe Donahue
VP Nuclear Oversight

Dan Mc Rainey
VP Major Projects

Mike Annacone
VP Organizational Effectiveness

Ben Waldrep
VP Corp. Governance and Ops. Support
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