



**V.C. SUMMER  
NUCLEAR STATION**

# VCS Unit 1

- Operating @ 100%
- Completed 18<sup>th</sup> refueling outage 2009, no outages in 2010
- Reaccredited operator training programs
- 10/10 candidates passed NRC license exam 2009, next class 2011
- Last cycle continuous run 475 days



# Pollen Storm hits V.C. Summer



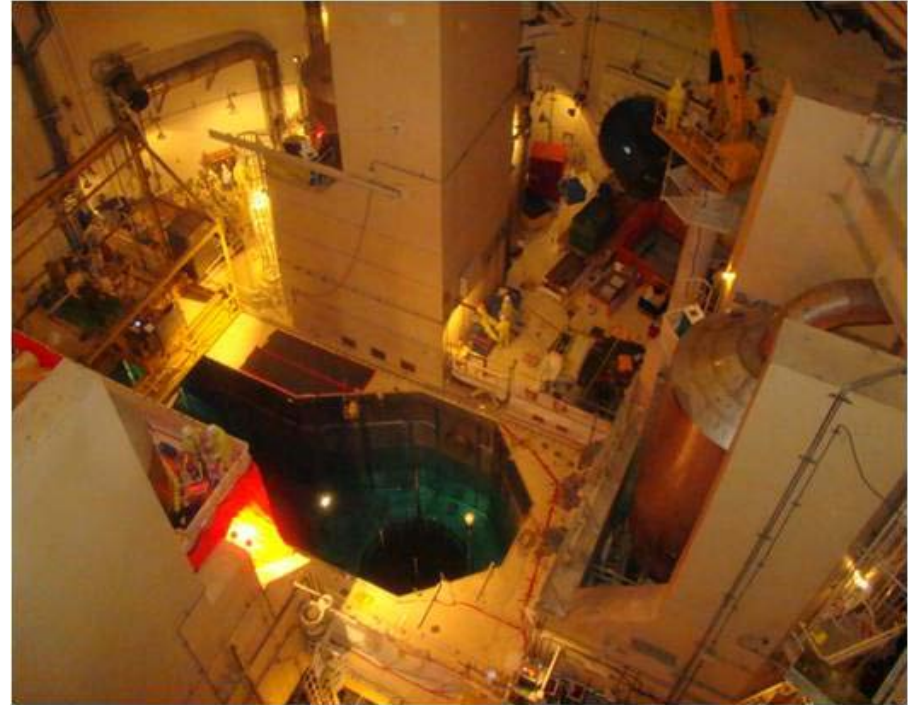
**V.C. SUMMER NUCLEAR STATION**

# Pollen Storm hits V.C. Summer



# Refuel 19 Overview

- RF-19 Starts In:  
**309 Days, 10 Hours, 36 Minutes**  
B TRAIN OUTAGE  
C BUS OUTAGE
- 27 Days
  - Start Date April 15, 2011
- \$33 million O&M Budget
- First outage under Alliance contract
  - Westinghouse – Primary Activities
  - Shaw – Secondary Activities



# NRC REGULATORY INSPECTIONS

- June 14-18
- June 28 - July 2
- July 26-30
- August 9-13
- August 23-27
- August 16-20
- August 23-27
- September 13-17
- October 4-8
- October 18-22
- November 15-19
- Jan. 10-14, 2011
- Jan. 31 – Feb. 4
- Feb. 14-18, 2011
- Feb. 28 – Mar. 4
- Apr. 25-29, 2011
- May 9-13, 2011
- May 2-6, 2011
- Triennial Fire Protection Week 1
- Triennial Fire Protection week 2
- Heat Sink Inspection
- Mods / 10 CFR 50.59 – Week 1
- Mods / 10 CFR 50.59 – Week 2
- RP Public Radiation Protection
- Requal Training Inspection
- Emergency Preparedness
- Problem Identification and Resolution (PI&R) – Week 1
- PI&R – Week 2
- Security Baseline Inspection
- Component Design Basis Inspection (CDBI) – Week 1
- CDBI– Week 2
- CDBI– Week 3
- CDBI – Week 4
- RP Baseline Week 1
- RP Baseline Week 2
- Inservice Inspection

**All in addition to 2 resident inspectors**

# Building the Next Generation of Operators, Engineers & Technicians



# Initial License Operator (ILO) Class



Class in progress:

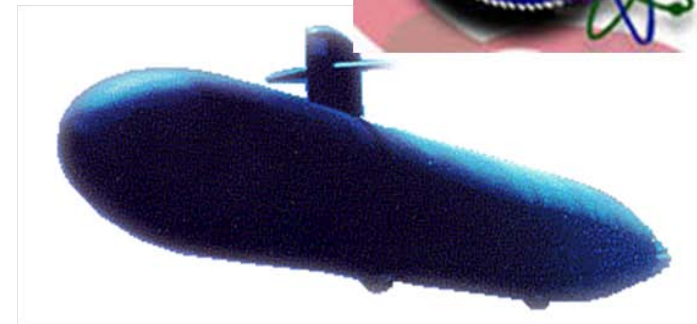
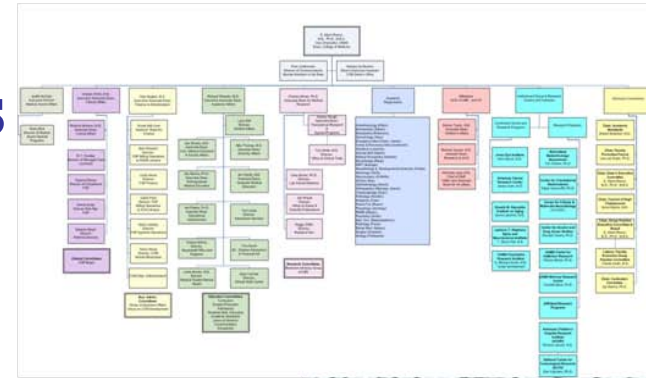
- 10 Reactor Operators
- 5 Senior Reactor Operators
- Aug 2011 (Audit exam)
- Sep 2011 (NRC exam)

AO → RO → SRO → CRS → SS



# New Auxiliary Operator - Challenges

- 20 new Auxiliary Operators hired last 2 years for NND & Unit 1 needs.
- Unit 1 will send 14 operators to NND after ILO class completes (Fall 2011).
- Makeup of those (Auxiliary Operator, Reactor Operator and Senior Reactor Operator) supplied to Unit 2 depends on success of the ILO class and Unit 1 needs.
- The number of new hires for Unit 1, 2 and 3 is greater than the Navy can supply.



# Colleges & Universities Stepped Up

- Midlands Tech, Aiken Tech, Spartanburg Community College, O-C Tech and York Tech have programs for health physics, mechanical maintenance, I&C, Operators and electrical maintenance
- Clemson, S.C. State, Francis Marion and USC have internship programs for health physics and engineering



# Training Opportunities

- SCANA donated \$100,000 to Midlands Tech Quick Jobs Center in Fairfield County
- Shaw conducting on-site craft training
- Loaned instructors from VC Summer to MTC
- V.C. Summer/MTC partnership: develop two-year associate degree in nuclear systems technology
  - SCE&G scholarships
  - NRC scholarships

# Forecast RP/HP Shortage

- Radiation Protection/Health Physics
  - Technicians and Health Physicists
  - Industry Shortage of Health Physics Technicians
  - College Programs are Emerging Again after Being Dormant for 20-25 Years
  - INPO/NEI Development of the Uniform Curriculum (INPO ACAD 08-006)
  - Pipeline for VCS - Aiken Technical College (2 yr), Spartanburg Community College (2 yr), and Francis Marion (4 yr)
  - Progress, Duke & SRS also benefiting

# Training the Trainers

## Westinghouse Instructor Senior Reactor Operator Certification

- 24 instructors will be trained at Westinghouse in order to train VCS Licensed Operators
- First 12 instructors are in Cranberry PA for the initial AP1000 systems training now

# New Auxiliary Operator - Challenges

- Midlands Technical College 'Nuclear Systems Technology Program' in 2008.
- 90 students are presently enrolled.
- The second 'Boot Camp' of 16 students started May 10 and lasts until late June.
- First students will graduate from the program this September.
- Non-Navy personnel typically take 1 year longer to qualify AO than Ex-Navy (learn to be an 'Operator').



## Future Program Offering

# Midlands Technical College Nuclear Operator Program

### About the Program

- Allows students to train to become nuclear operators at the V.C. Summer Nuclear Station in Fairfield County
- Students earn a two-year associate degree from MTC with a strong emphasis in Mechanical Engineering Technology and Nuclear Operations
- Students complete their training at the V.C. Summer plant
- Only program of its kind in South Carolina

### Benefits

- The entry-level starting rate for nuclear operators is \$20-25 per hour with increases every six months as additional training is completed. Annual salaries are in the range of \$45,000-55,000.
- Entry-level operators complete on-the-job training to become licensed reactor operators who can make yearly earnings in the six-figure range.
- Excellent benefit packages including health, dental, vision, life insurance, retirement and savings plans are offered.
- All operators work 12-hour shifts. This schedule provides 70 more days off per year than an eight-hour schedule and includes a scheduled seven-day-off period every five weeks.

### Skills Needed for Success in the Program

Students who are a good fit for this program are analytical, methodical, mature, conscientious, good leaders, and like to be challenged. The ability to understand procedures, follow directions, work as a team, and handle stress are also important. Students should also have strong algebra, geometry, and computer skills, as well as be able to successfully complete physics and chemistry coursework.

You can get **anywhere** from here.



*For more information, call Krista Lloyd-Jones at (803) 822-3232.*

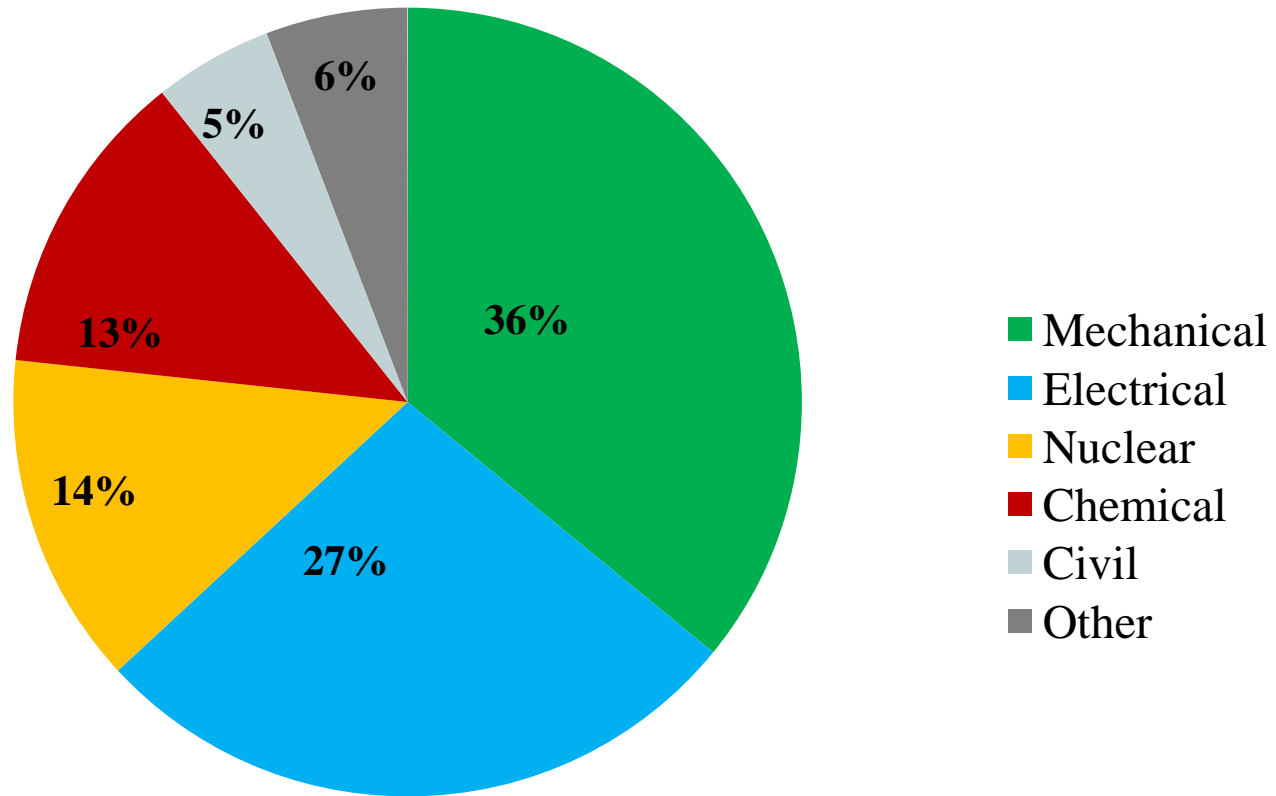
# Boot Camp

- Midlands Technical College - Non Licensed Operators
- 10 wk, paid boot camp for 16 students at VC Summer
  - Shift work,
  - basic nuclear systems
  - Fire Academy
  - Simulator
  - Drug/alcohol screenings
  - Test, test, test....
- Students are chosen from the top students enrolled in the Non Licensed Operator 2 year degree program



# Engineers by Discipline

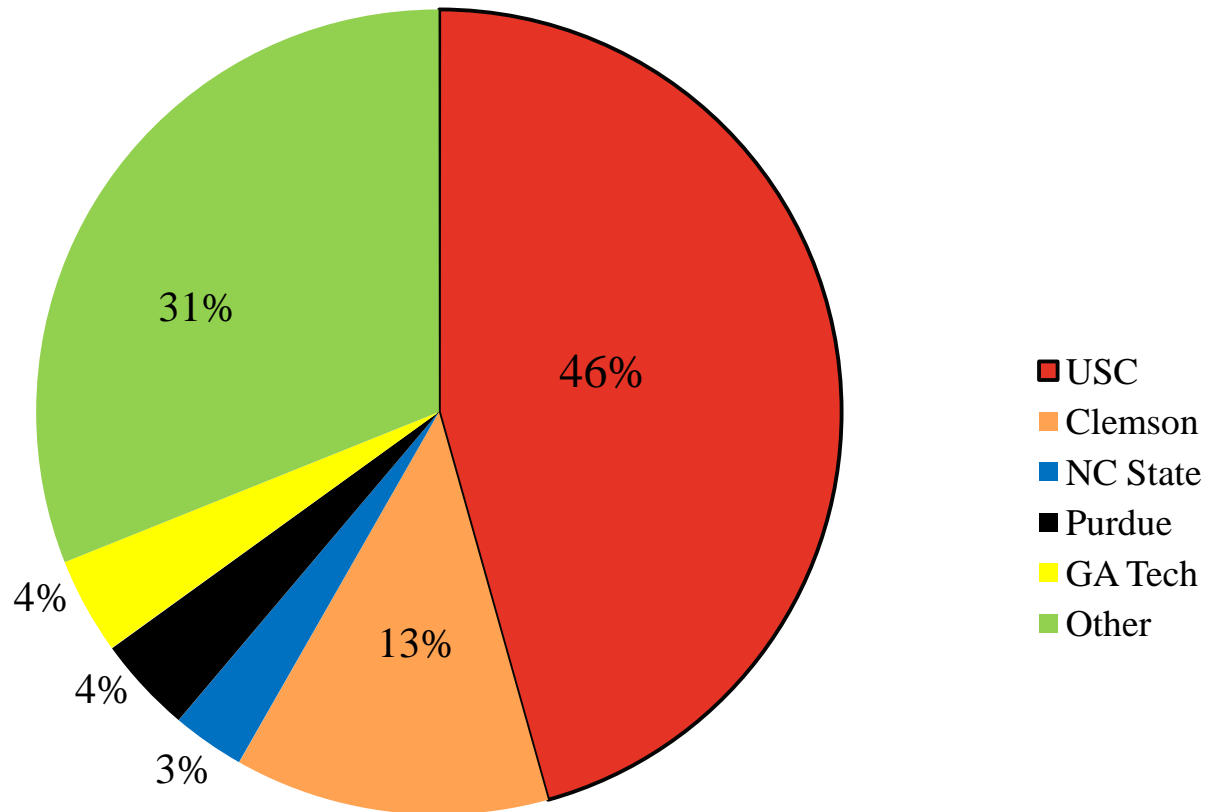
## 15% of Workforce



Also need:

- Operators
- Mechanics
- Electricians
- Instrument techs
- Chemists
- HP's
- Security
- QA/QC
- Planners
- Instructors

# Engineers by School

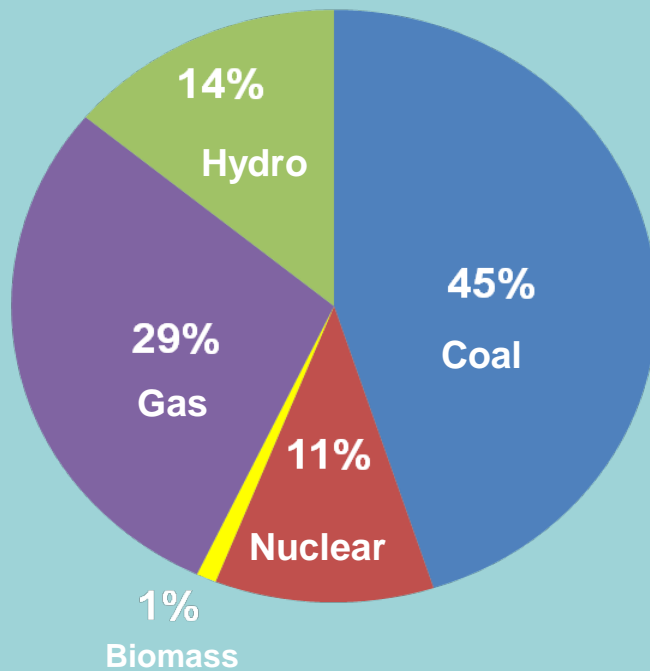


A black and white promotional photograph of the main cast of the TV show 'Lost'. The cast members are arranged in a group, looking directly at the camera with serious expressions. The text 'And Now For Something Completely Different' is overlaid on the left side of the image.

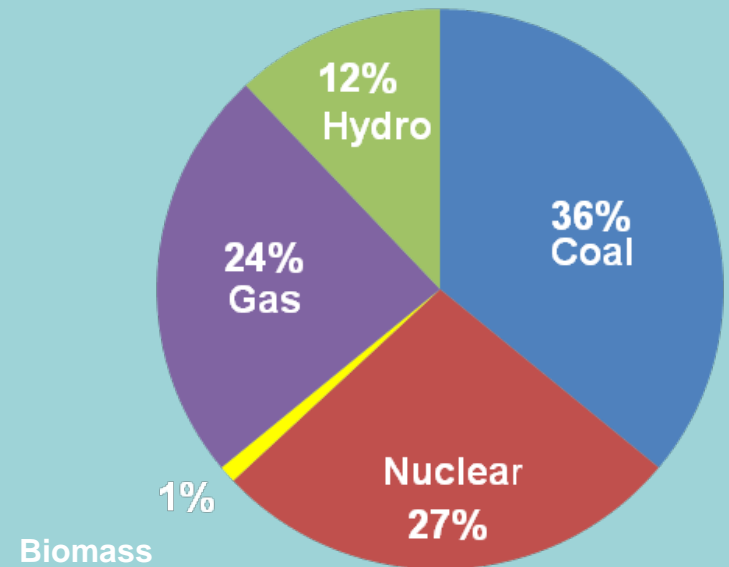
**And Now For Something  
Completely Different**

# Generation Mix by Capacity

SCANA'S Current Fuel Mix

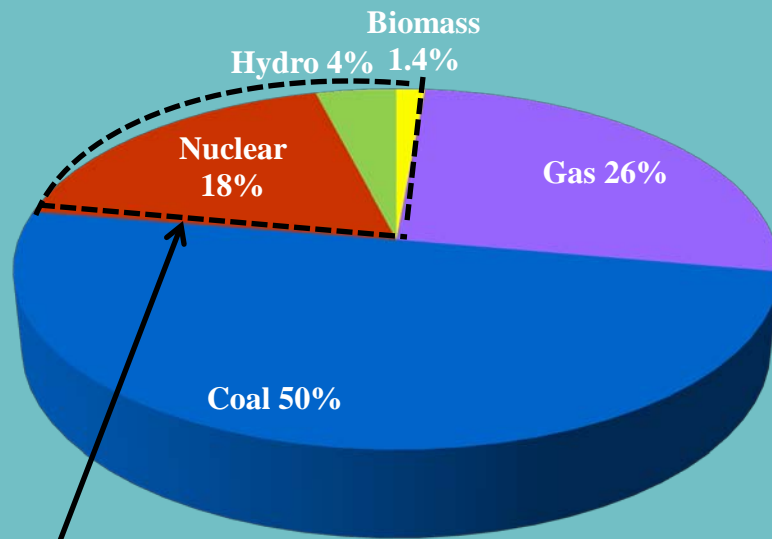


SCANA'S Future Fuel Mix



# Generation Mix – by Dispatch

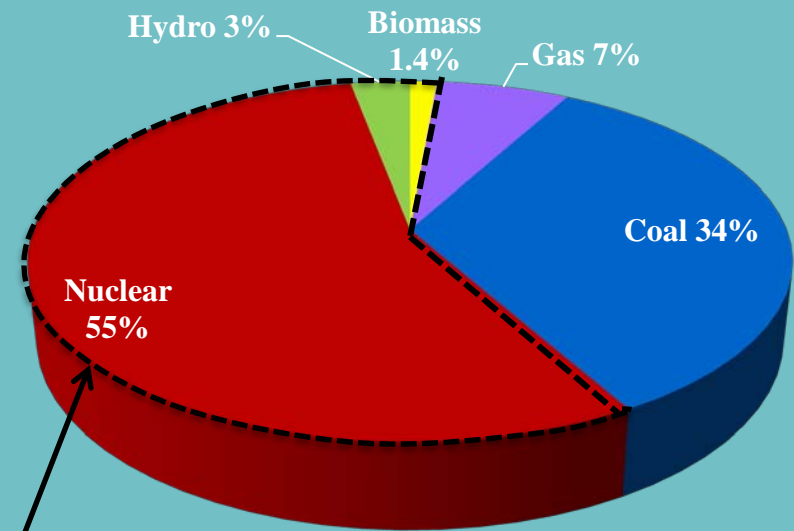
## Current Generation Mix



Non-emitting  
23.4%

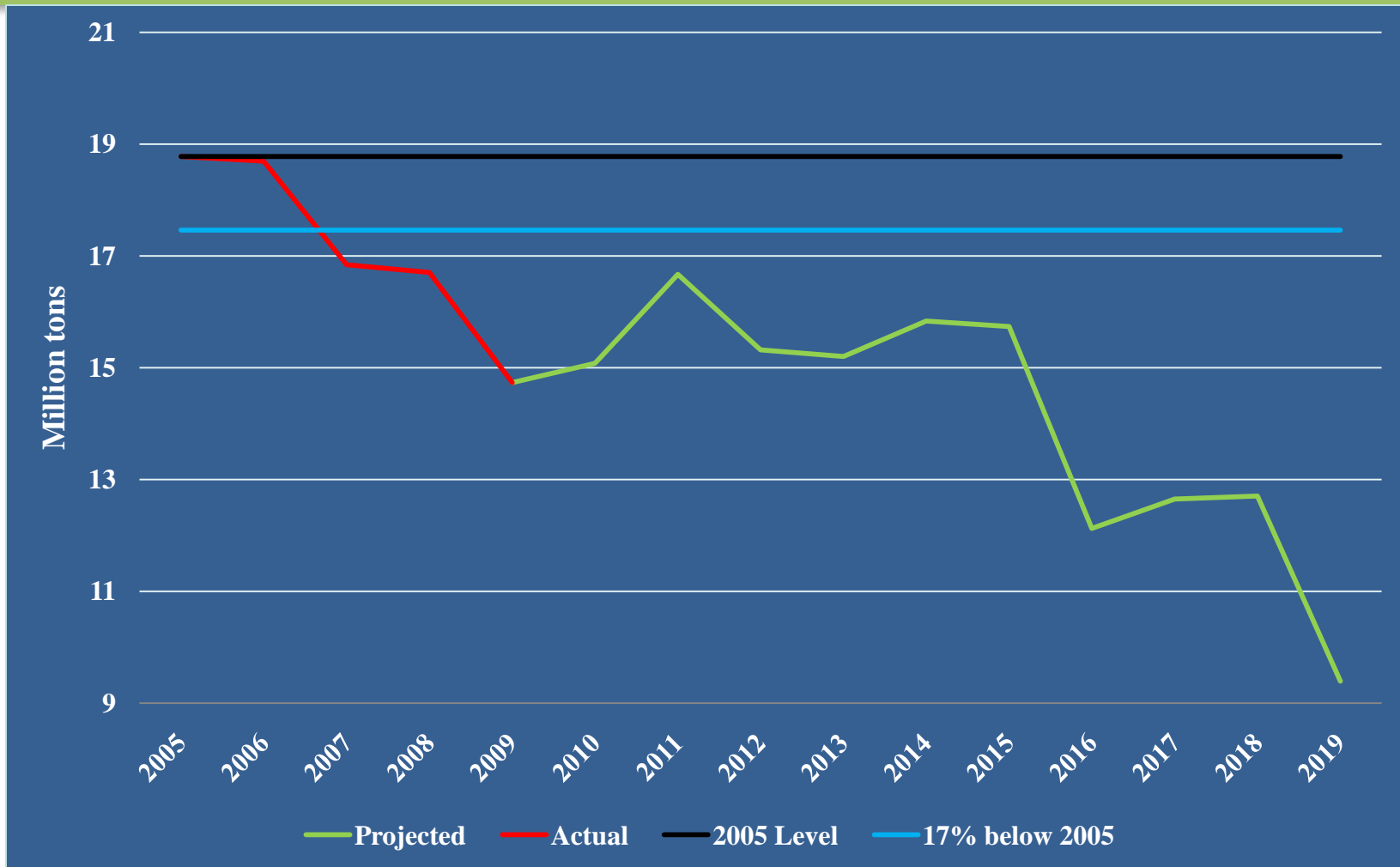
As of December 31, 2009

## 2019 Generation Mix



Non-emitting  
59.4%

# CO2 Reduction with New Nuclear



# China Update

Sanmen Lifting First  
CV Ring into Place on  
Lower Bowl



## Sanmen Lifting 2nd CV Ring into Place





**That's All Folks**

