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# Columbia Plant Overview

**Marc Rosser**

Environment, Health & Safety Manager

Columbia Fuel Fabrication Facility

Westinghouse Electric Company



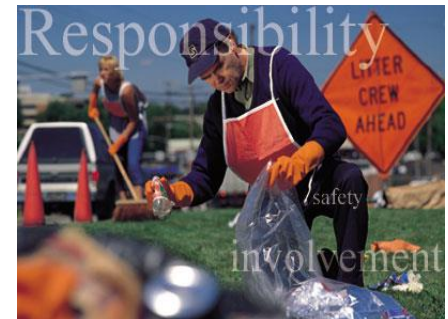
# Westinghouse Electric Company



Westinghouse Electric Company provides fuel, services, technology, plant design, and equipment to utility and industrial customers in the worldwide commercial nuclear electric power industry.

Westinghouse Electric Company Headquarters - Cranberry Woods, Pennsylvania, USA

**Nearly half of the nuclear power plants in operation worldwide, and nearly 60 percent in the United States, are based on Westinghouse technology.**



# Westinghouse Core Businesses



## Nuclear Fuel

A single-source fuel provider for PWR, BWR, VVER, and AGR reactors worldwide



## Nuclear Power Plants

Specializing in the technology of new nuclear power plants and component manufacturing



# Westinghouse Core Businesses



## Nuclear Services

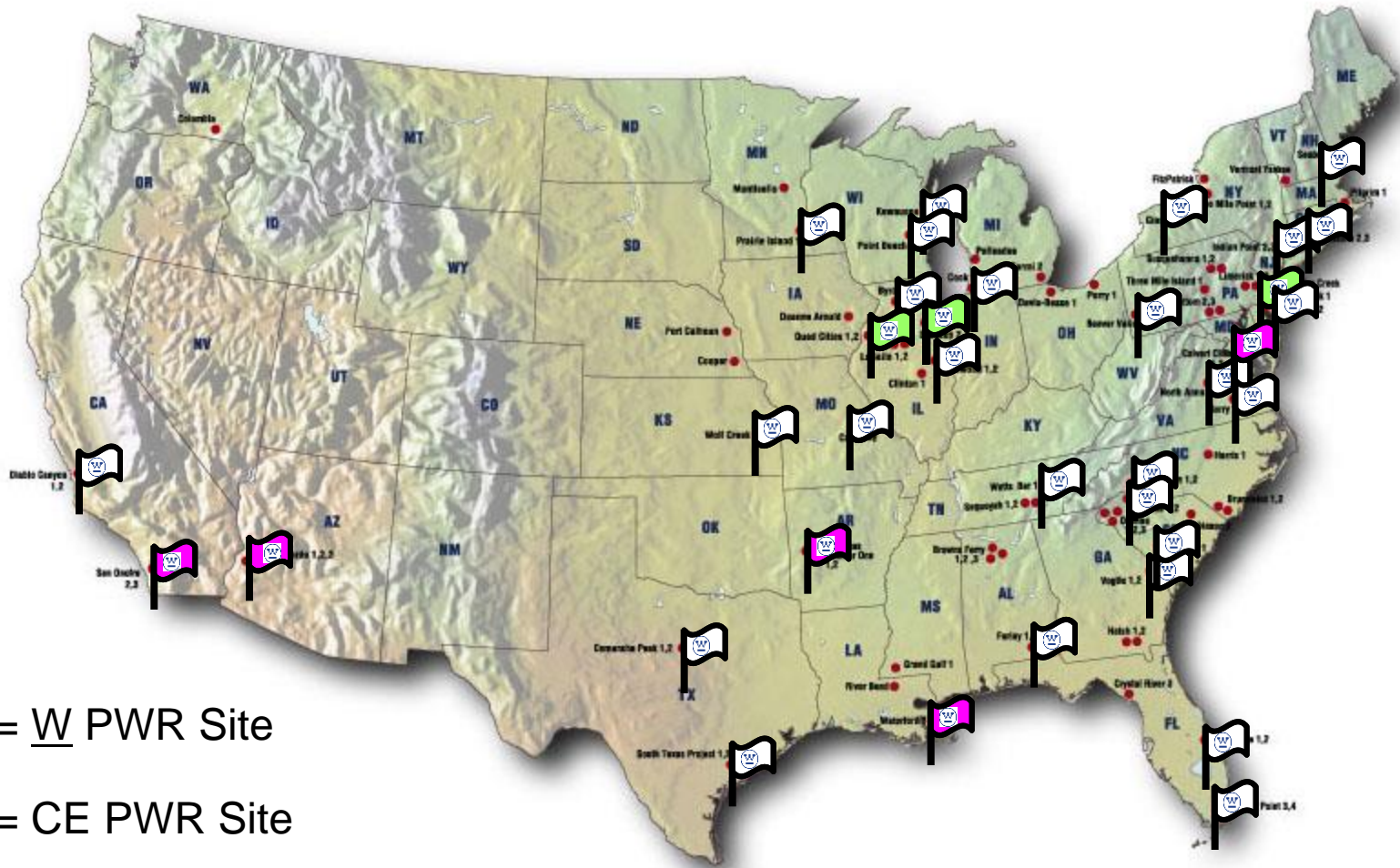
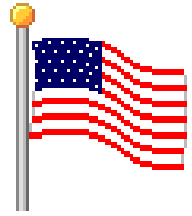
Maintenance, repair and replacement of equipment, engineering services and methods for the design, operation and safety of nuclear power plants



## Nuclear Automation

Westinghouse is committed to providing customers support throughout the life cycle of the control and safety systems of their plants.

# Westinghouse Nuclear Fuel U.S. Customer Base



 = W PWR Site

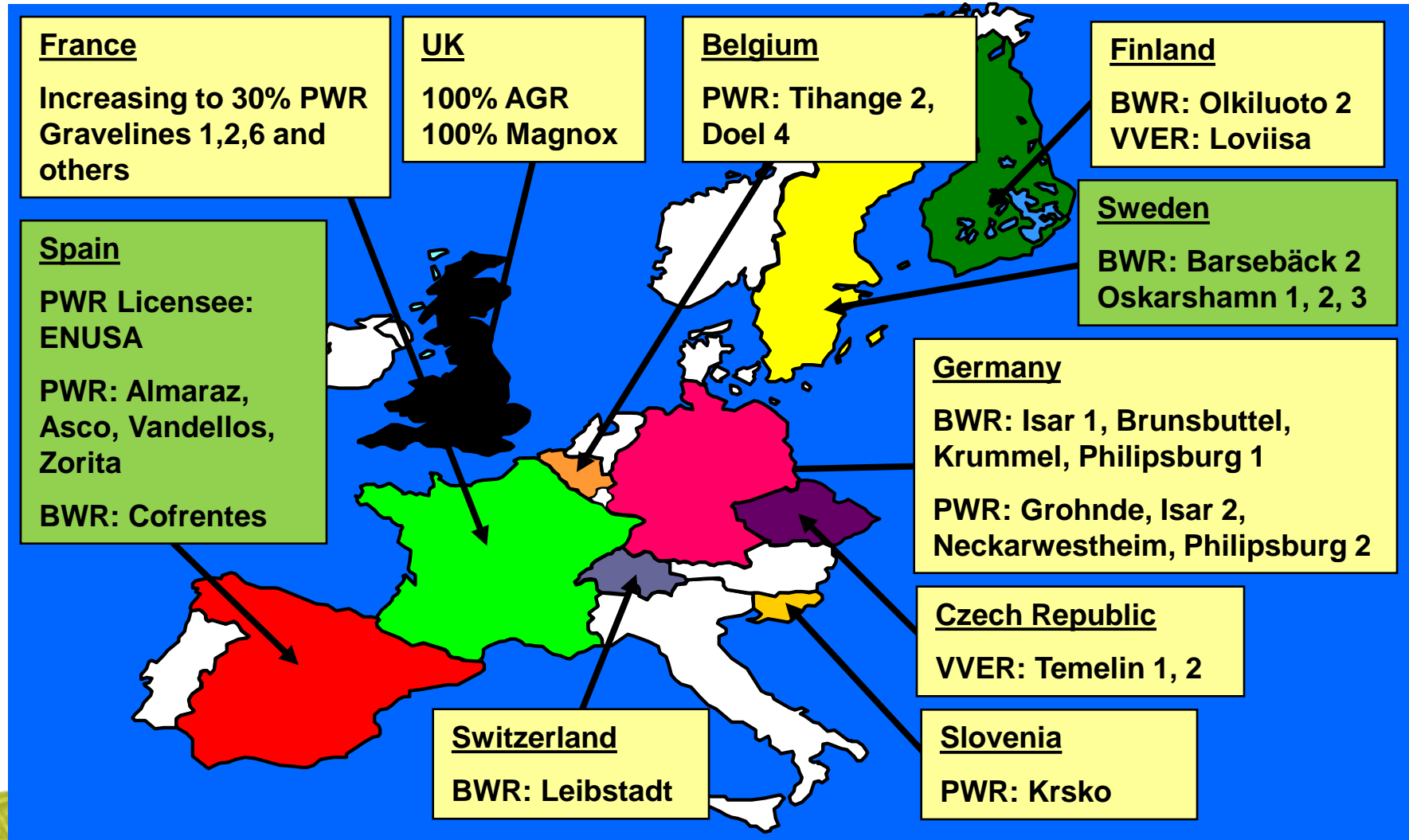
 = CE PWR Site

 = BWR Site



# Westinghouse Nuclear Fuel

## European Customer Base



# Westinghouse Nuclear Fuel Asian Customer Base

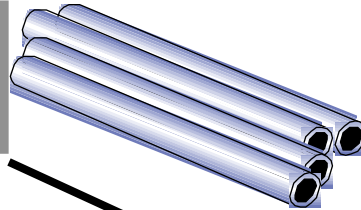


# Nuclear Fuel - U.S. Manufacturing

## **SPECIALTY METALS PLANT**

Blairsville, PA

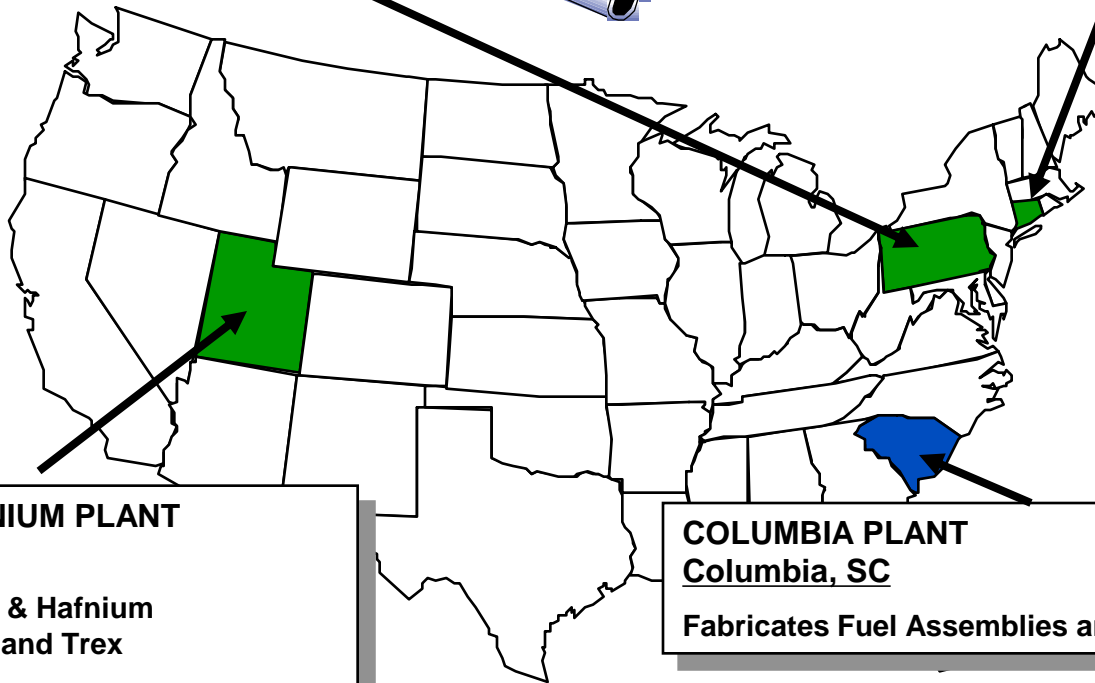
Fabricates Fuel Tubing from WZ TREX



## **WINDSOR FUEL COMPONENTS FACILITY**

Windsor, CT

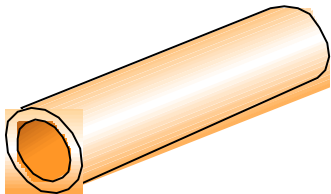
Produces CE Design Mechanical Components



## **WESTERN ZIRCONIUM PLANT**

Ogden, UT

Produces Zirconium & Hafnium  
Metal strip, Channel and Trex  
from Zircon Sand



## **COLUMBIA PLANT**

Columbia, SC

Fabricates Fuel Assemblies and Components





# Westinghouse Nuclear Fuel



**Columbia Plant**



# Westinghouse Columbia Plant - Background



- Opened in 1969
- 550,000 ft<sup>2</sup> facility (51,500 m<sup>2</sup>)
- 1,156 acre site (4.7 km<sup>2</sup>)
- UF<sub>6</sub> conversion through fuel assembly fabrication, plus
  - FA component manufacture
  - Core component manufacture
  - Product design and testing
- Approximately 915 people in the plant
- Approximately 1,250 people on site

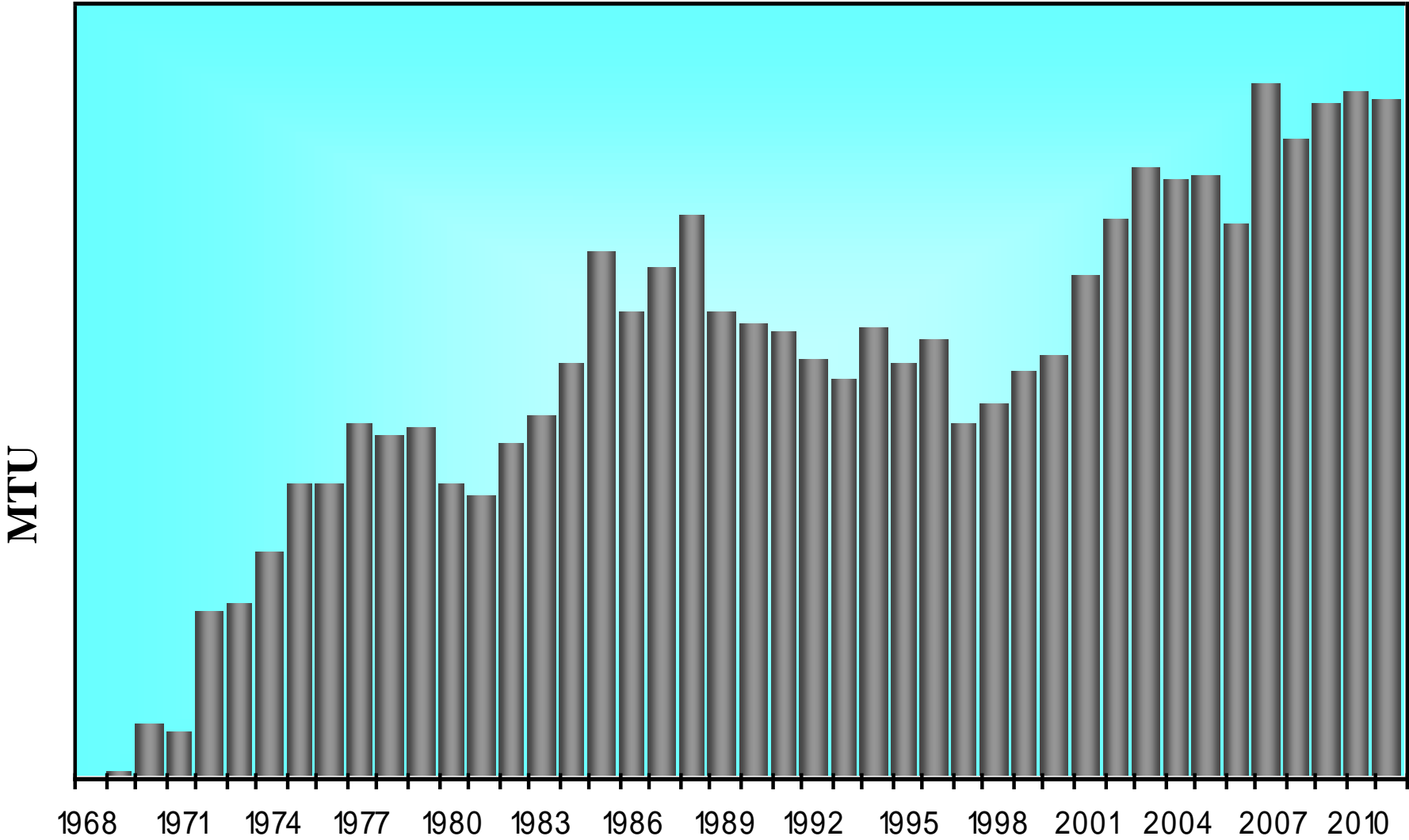


# Westinghouse Columbia Plant – Other Key Facts



- Majority Owner: Toshiba
- Approximately \$95 million in annual compensation at Columbia Site
- ISO 9001 Certified (Quality)
- ISO 14001 Certified (Environmental)
- Some starting material made from blended down high-enriched uranium
- More than 10 percent of electricity generated in the entire U.S. comes from nuclear fuel made at our plant

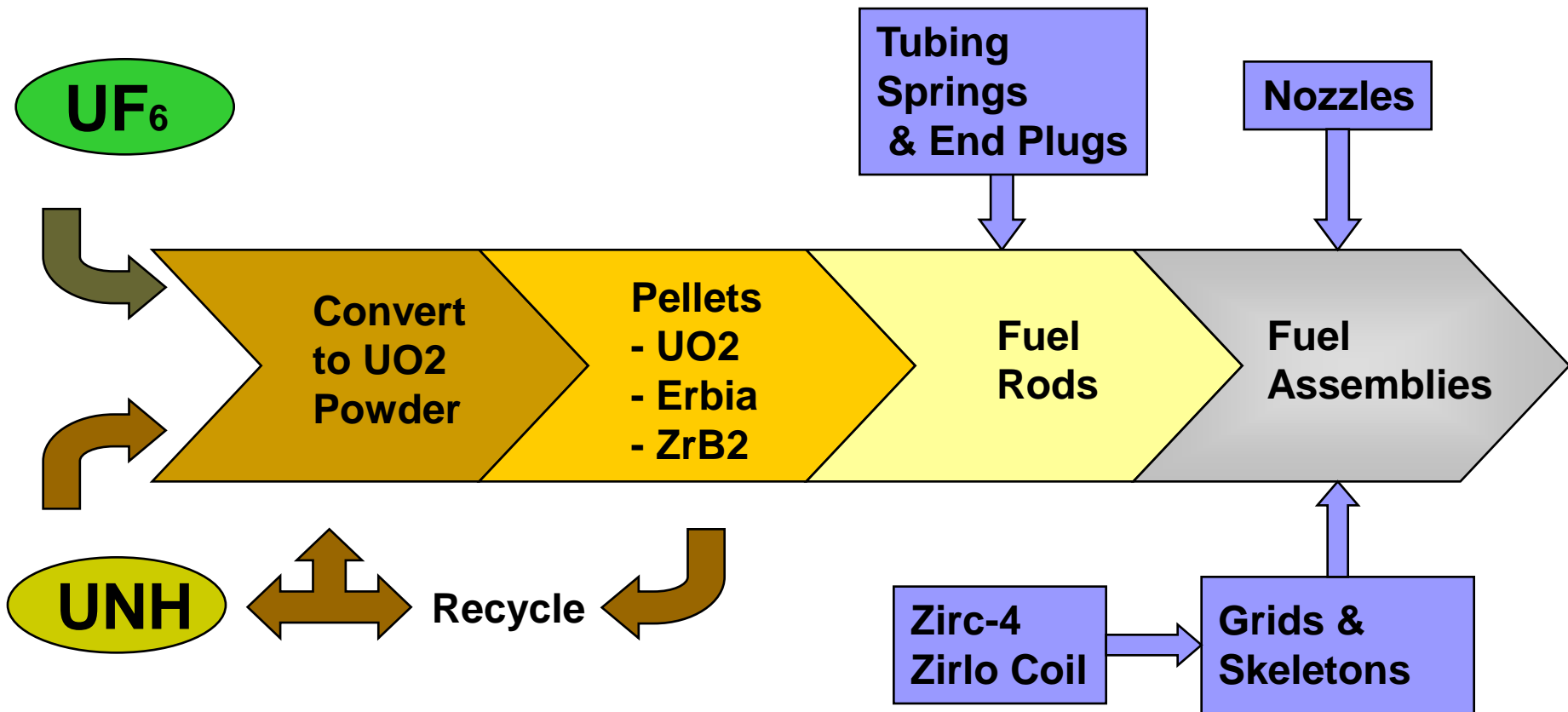
# Annual Fuel Production at Columbia Plant





# Columbia Plant

## Fuel Fabrication Process



# The Columbia Site has one priority:

## Continuous Improvement In ...

1. Safety



**Be safe**

2. Quality



**Make good ones**

3. Production



**Make plenty of them**

**Pretend someone is watching**



# Recent Columbia Plant Successes

- Eliminated use of anhydrous ammonia in our process
- Significant improvement in recycling of wood, cardboard, plastic and aluminum has led to a reduction of 32 percent in waste going to landfill in the past fiscal year
- W.A.I.T. (Wildlife and Industry Together) initiatives and partnership with Mill Creek Elementary recognized by Toshiba as one of the top biodiversity programs in the company

## Recent Columbia Plant Successes (cont.)

- Strengthened our emergency preparedness partnership with local agencies (CFD, RCSO, RC EMS, DHEC, and Richland Memorial Hospital) through on-site drills, exercises, and other joint training activities
- Continued our year-over-year reduction in radiation dose to employees and the environment
- Providing fuel assemblies for new AP1000 plants currently under construction in South Carolina, Georgia, and China



# Ongoing Improvement Activities

- Invested > \$10 million in facility improvements to enhance nuclear and chemical safety over the past five years
- Initiated a project to evaluate the facility response to seismic and severe weather events and will execute upgrades, as appropriate
- In the process of evaluating all facility job tasks using the Job Safety Analysis (JSA) process, with the goal of improving safety in all aspects of facility operation

# Questions?

