

The logo consists of five overlapping semi-circles arranged in a vertical, slightly staggered pattern. The colors transition from a dark blue on the left to a light lavender on the right.

Clean Air Project

Merrimack Station

March 31, 2010
NH Public Utilities Commission
Docket 08-103 Informational Session



**Public Service
of New Hampshire**

The Northeast Utilities System

Agenda



- Introductions
- Project Overview
 - Purpose of the Clean Air Project
 - How the Technology Works
 - Project Status
 - Contracts Summary
 - Budget
 - Schedule
 - Jobs
 - Project Benefits
- Photos
- Discussion

Introductions



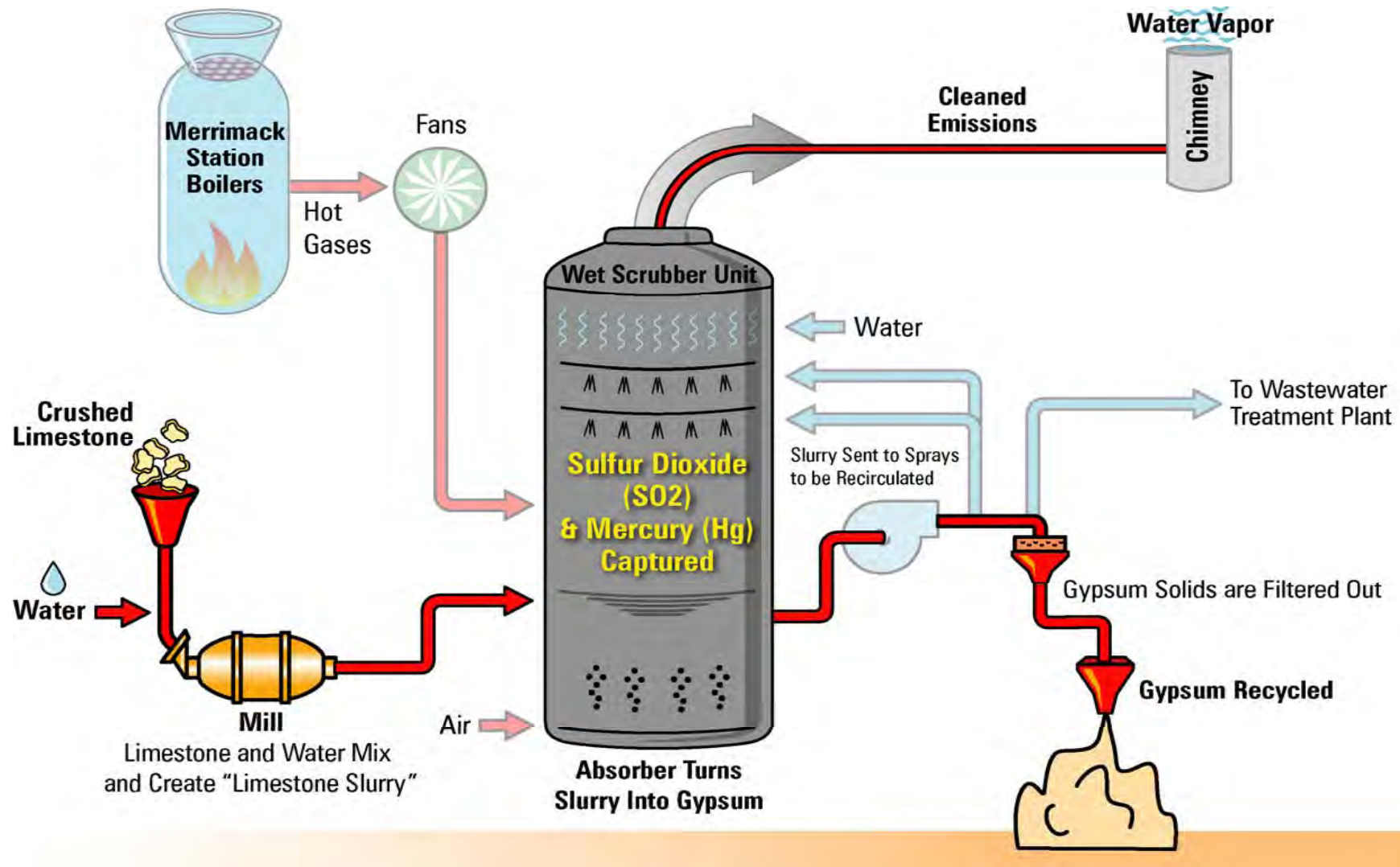
- Bill Smagula, Director - PSNH Generation
- Lynn Tillotson, Technical Business Manager
- Steve Hall, Rate & Regulatory Services Manager

Purpose of the Clean Air Project



- Comply with the State law (RSA:125-O:11-18) that requires the installation of the wet flue gas desulfurization technology at Merrimack Station by July 1, 2013
- Achieve significant reductions in mercury and sulfur dioxide emissions
 - 80% Mercury
 - 90% SO₂

How the Wet Flue Gas Desulfurization Technology Works



Project Status



PSNH is 2/3's through the six-year project:

- Engineering is almost complete
- Over \$300 Million and over 85 contracts committed
- Construction is in full swing
- Over 300,000 man-hours expended to date

Contracts Summary



	<u>\$ Millions</u>
<u>Major Supplier Contracts</u>	\$165.6
<ul style="list-style-type: none">• Scrubber• Material Handling (Limestone, Gypsum)• Waste Water Treatment• Chimney	
<u>Large General Contracts</u>	\$ 97.1
<ul style="list-style-type: none">• Foundations• Duct Work and Installation (3)• Site Work (8)• Project Management	
<u>Specialty and Service Contracts</u>	\$ 33.6
<ul style="list-style-type: none">• Electrical, Sound, Cranes, Fans, Emissions Monitors, Insulation, Legal, Etc.	

OVER 85 CONTRACTS – IN PLACE TO DATE: \$306.3 MILLION

Approximately five contracts remain to be issued over the next few months totaling about \$35 Million.

Budget (\$ in Millions)



	Thru 2007	2008	2009	2010	2011	2012	2013
Cost By Year		24.8	119.3	148.6	99.0	59.2	3.4
Cumulative Cost	2.7	27.5	146.8	295.4	394.4	453.6	457.0

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Jobs



- Clean Air Project – Currently Active On-Site:
 - 31 companies
 - 215 craft workers
 - 75 supervisory and support personnel
 - Over 300,000 man-hours expended to date
- Merrimack Station
 - 110 employees
 - Annual outages temporarily increase work force twice a year
 - Merrimack Station uses over 100 local businesses for labor and materials
- New Hampshire Economy
 - CAP has spurred local economy: suppliers, small businesses, housing, restaurants, etc.
 - Local suppliers: concrete, site work, labor, equipment rentals, security, fuel, tools, parts, food, etc.

Project Benefits



Reduced Emissions

- Mercury – 80% reduction or better
 - Capture about 220 pounds of mercury/year
- Sulfur – 90% reduction or better
 - Capture about 31,000 tons of SO₂/year
- Provides additional reduction to particulate emissions

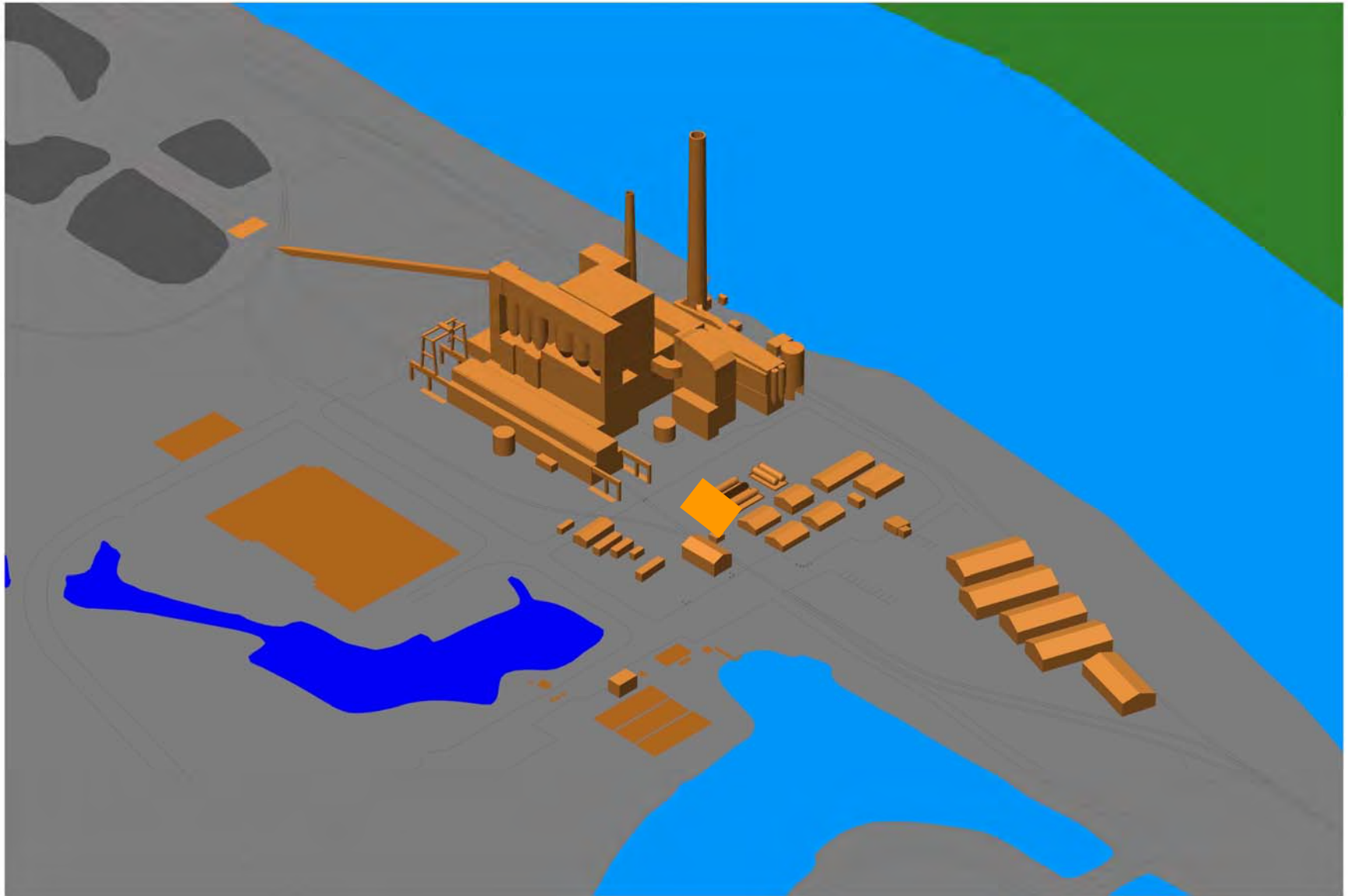
Early Completion = Early Emissions Reduction

- Scheduled to be done by July 1, 2012 (one year early)

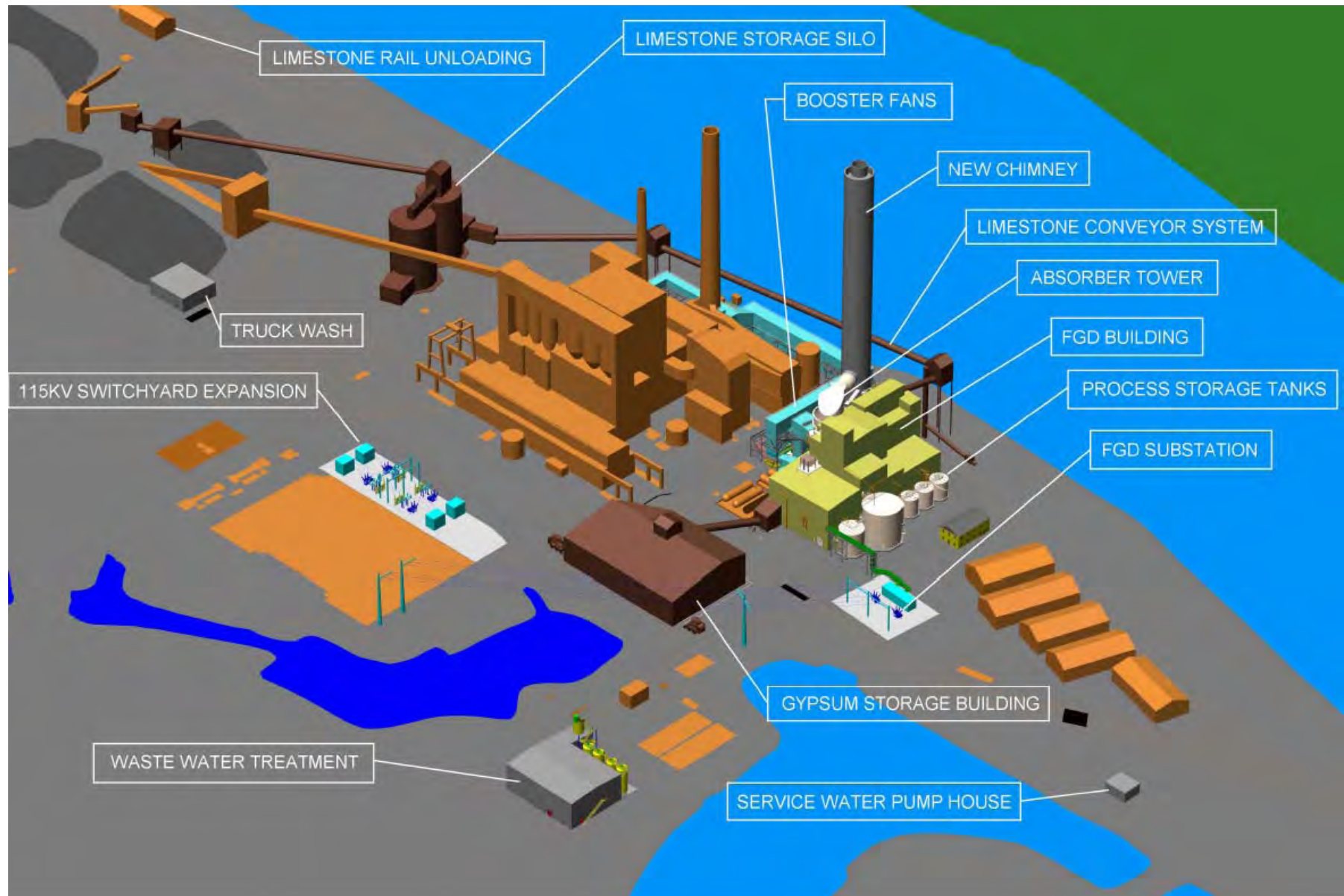
Direct Economic Benefit of Project Workforce: \$50 Million, 400+ jobs

Reliable Energy, from one of the lowest emission coal plants, as a bridge to the Future

Merrimack Station: 2008



Merrimack Station: 2012





12/02/2008



03/24/2009



03/31/2009



05/21/2009



05/29/2009





06/12/2009



06/18/2009



06/25/2009



10/01/2009



10/05/2009



11/11/2009



11/11/2009



10/09/2009



11/18/2009



02/13/2010



03/19/2010



15/09/2009



11/18/2009



11/24/2009



03/19/2010



03/24/2010



06/18/2009



24/09/2009



11/24/2009



03/19/2010



02/13/2010



03/19/2010



03/06/2010



Perspective Sketch

Merrimack Station Clean Air Project

Bow, New Hampshire



**Public Service
of New Hampshire**

The Northeast Utilities System

TFM *Design*
Landscape Architects