

Steven L. Beshear
Governor



Leonard K. Peters
Secretary

Commonwealth of Kentucky
Energy and Environment Cabinet
Kentucky State Board on Electric Generation and Transmission Siting
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Frankfort, Kentucky 40602-0615
Telephone: (502) 564-3940
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June 14, 2011

TO: DIVISION OF FILINGS

RE: Case No. 2005-00152

Joint Application of the Illinois Municipal Electric Agency and the Indiana Municipal Power Agency for Approval to be a 25% Partner in the Construction of a 750 Megawatt Addition to the Existing Trimble County Generating Facility in Trimble County, Kentucky

Please file in the administrative record of the above referenced case the enclosed memorandum and attachments regarding the site visit conducted at the Trimble County Generating Facility near Bedford, Kentucky on May 11, 2011.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Derouen".

Jeff Derouen
Executive Director

Enclosures

cc: Parties of Record

INTRA-AGENCY MEMORANDUM

**KENTUCKY STATE BOARD ON ELECTRIC GENERATION
AND TRANSMISSION SITING**

TO: File: Case No. 2005-00152

FROM: Rick Bertelson, Team Leader

DATE: June 14, 2011

RE: **Joint Application of the Illinois Municipal Electric Agency and the Indiana Municipal Power Agency for Approval to be a 25% Partner in the Construction of a 750 Megawatt Addition to the Existing Trimble County Generating Facility in Trimble County, Kentucky**

On May 11, 2011, the Kentucky State Board on Electric Generation and Transmission Siting ("Siting Board") conducted a site visit of the completed and operating Trimble County Generating Facility Unit 2 in Trimble County, Kentucky ("TC2").

Four of the five permanent members of the Siting Board were in attendance: Vice Chairman James Gardner, Kentucky Public Service Commission (PSC); Commissioner Charles Borders, PSC; Kenneth Robinson, designee of Secretary Larry Hayes, Kentucky Cabinet for Economic Development; Secretary Leonard K. Peters, Kentucky Energy and Environment Cabinet; and Robert Amato, Secretary Peters' designee. In addition, Hon. Judge/Executive Randy Stevens, Trimble County, who was an ad hoc member of the Siting Board during the Board's review of the case, was also in attendance. Also in attendance on behalf of Siting Board Staff were Rick Bertelson, Ruth Rowles, and Elie Russell. Representatives of the Illinois Municipal Electric Agency and the Indiana Municipal Power Agency and representatives and counsel for Louisville Gas & Electric Company (LG&E) and Kentucky Utilities Company ("KU") were also in attendance. An attendance sheet is attached hereto. Prior to the site visit Board Staff prepared two maps for the Board's review in order to better orient the Board Members regarding the location of the facility and its components. Copies of the maps are attached hereto as well.

The Siting Board members and Board Staff arrived at the TC2 facility near Bedford, Kentucky at approximately 1:15 p.m. Eastern Daylight Time. Prior to touring the facility, the Siting Board members, Board Staff, and the parties' representatives and counsel met in the fifth floor meeting room of the TC2 facility for an overview of the construction history and issues related to the remedial measures required by the Board's November 16, 2005 Final Order granting the Joint Applicant's application. A copy of the PowerPoint presentation which was given by the parties is attached hereto.

During the meeting the representatives of KU and LG&E and Judge/Executive Stevens discussed the traffic issues which had been previously reported by the Joint Applicants in their annual reports filed in this matter. Judge Stevens confirmed that, during the construction phase there had been a number of complaints about the level of traffic and some of the driving habits of the employees working on the TC2 plant. However, he stated that, overall, the construction of the plant went very smoothly and that he was very pleased with the fact that the plant had been built in Trimble County, as it provided a very large, positive, economic benefit to the area.

After the meeting, the Siting Board members and Board Staff toured the facility with members of plant management serving as guides. Board members were able to observe that the TC2 facility uses the existing Trimble County Unit 1 ("TC1") emissions stack for exhaust of both units, as required by the November 16, 2005 Order. In addition, the Board members were able to observe that the beige and dull green paint colors of the TC2 facility are consistent with the existing features of TC1—another mitigation requirement of the Final Order.

The site visit concluded at approximately 3:45 p.m. EDT, and the members of the Siting Board and Board Staff returned to Frankfort, Kentucky at approximately 5:00 p.m.

During the tour, Board Staff and Mr. Amato took a number of digital photographs, copies of which are attached hereto.

Attachments: PowerPoint presentation containing digital photographs taken by Board Member Bob Amato and Board Staff during the site visit

Attendance sheet

PowerPoint presentation entitled "'Trimble County 2 Site Visit," prepared by LG&E and KU

Site map entitled "Site Layout and 2010 Imagery for Trimble County 2," prepared by Board Staff

Site map entitled "Case 2005-00152: Post-Construction Site Visit to Trimble County 2 Generation Facility," prepared by Board Staff

cc: Parties of Record

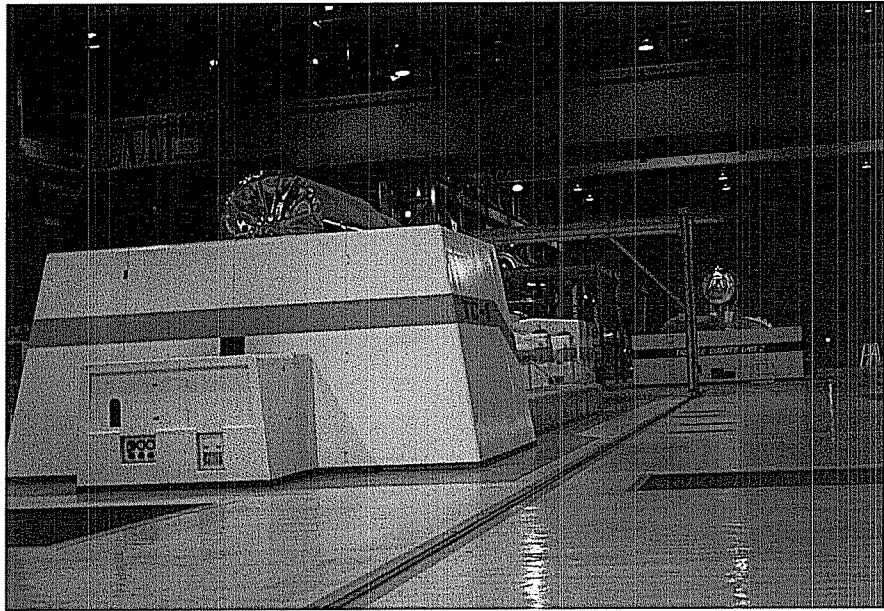
Kentucky State Board on
Electric Generation
and Transmission Siting

Case No. 2005-00152

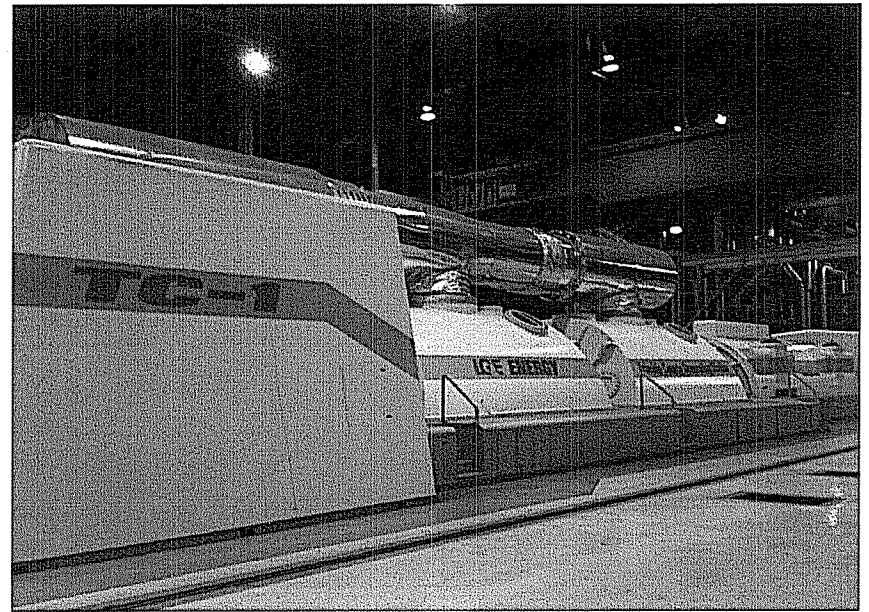
Joint Application of the Illinois Municipal Electric Agency and the
Indiana Municipal Power Agency for Approval to be a 25% Partner in the
Construction of a 750 Megawatt Addition to the Existing Trimble County Generating
Facility in Trimble County, Kentucky

Site Visit – Bedford, Kentucky

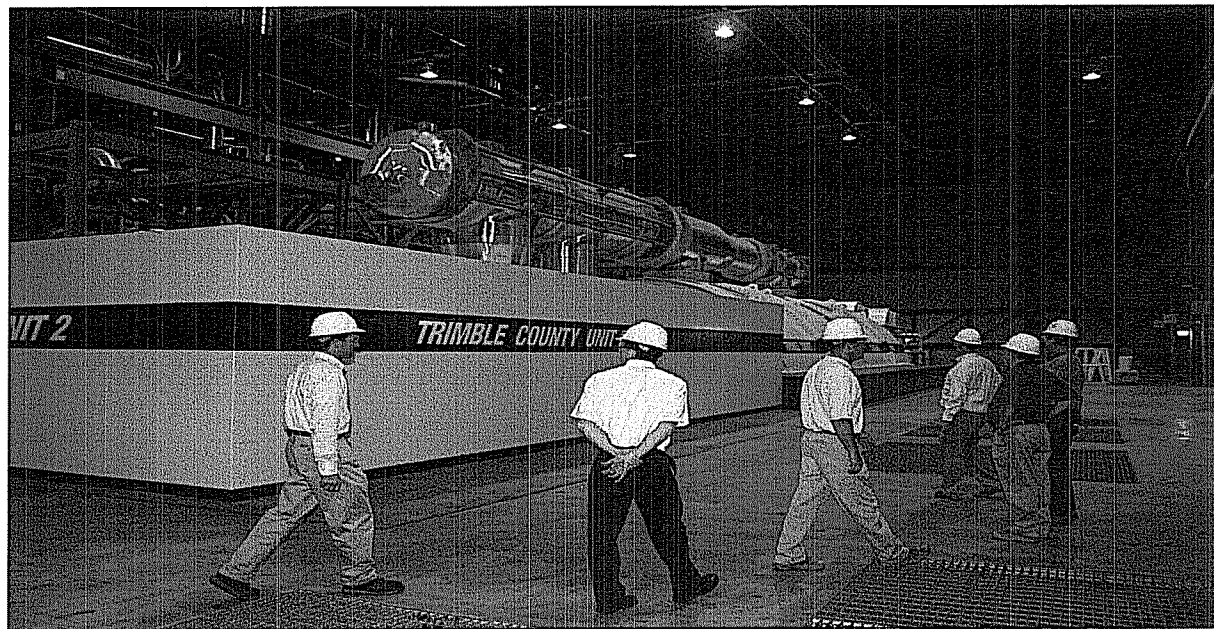
May 11, 2011



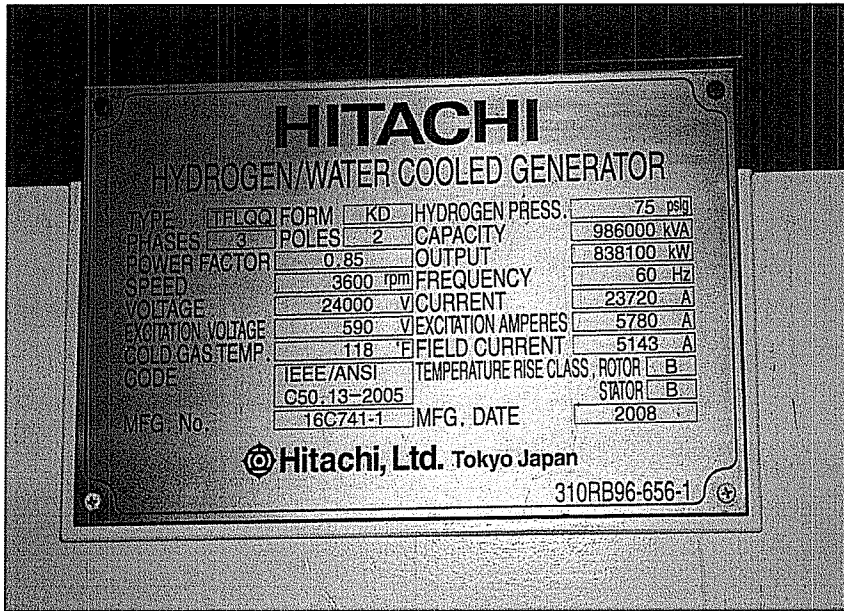
Rear view of Trimble Unit 1



Side view of Trimble Unit 1



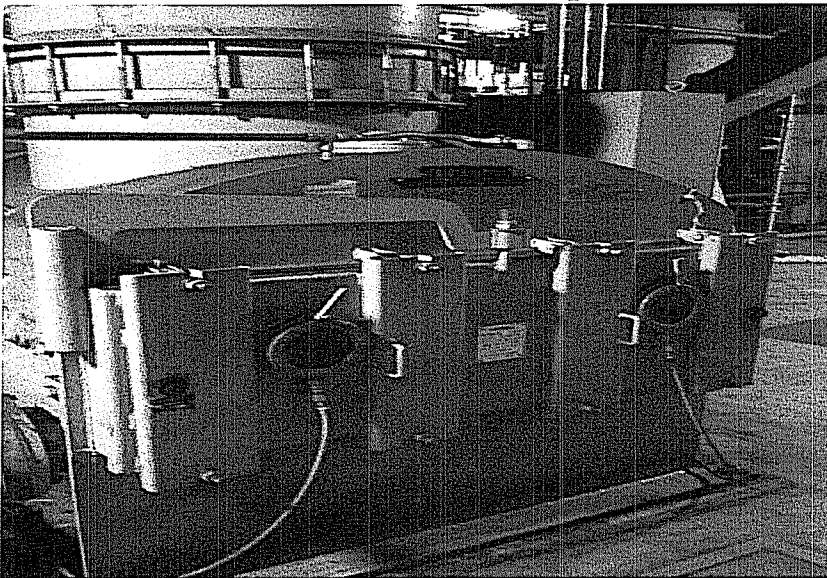
Trimble Unit 2



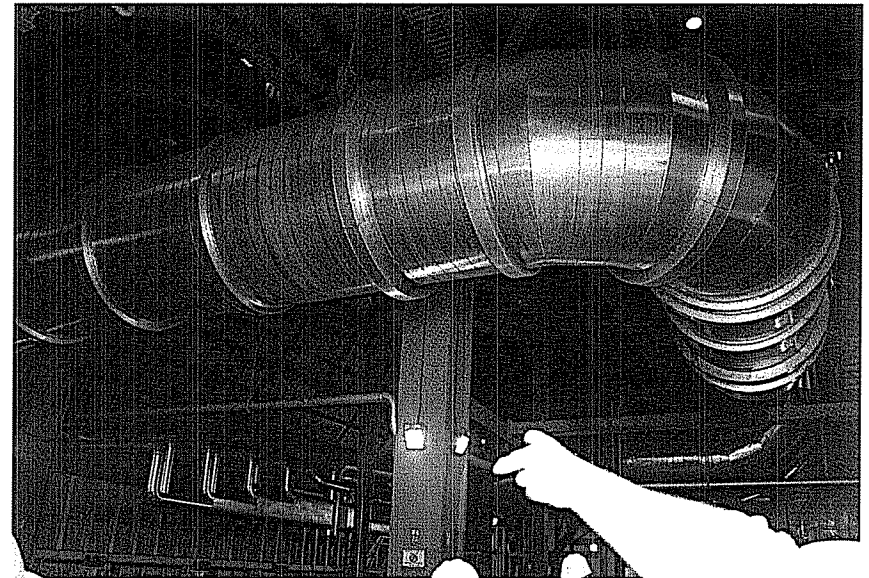
Trimble Unit 2 Nameplate



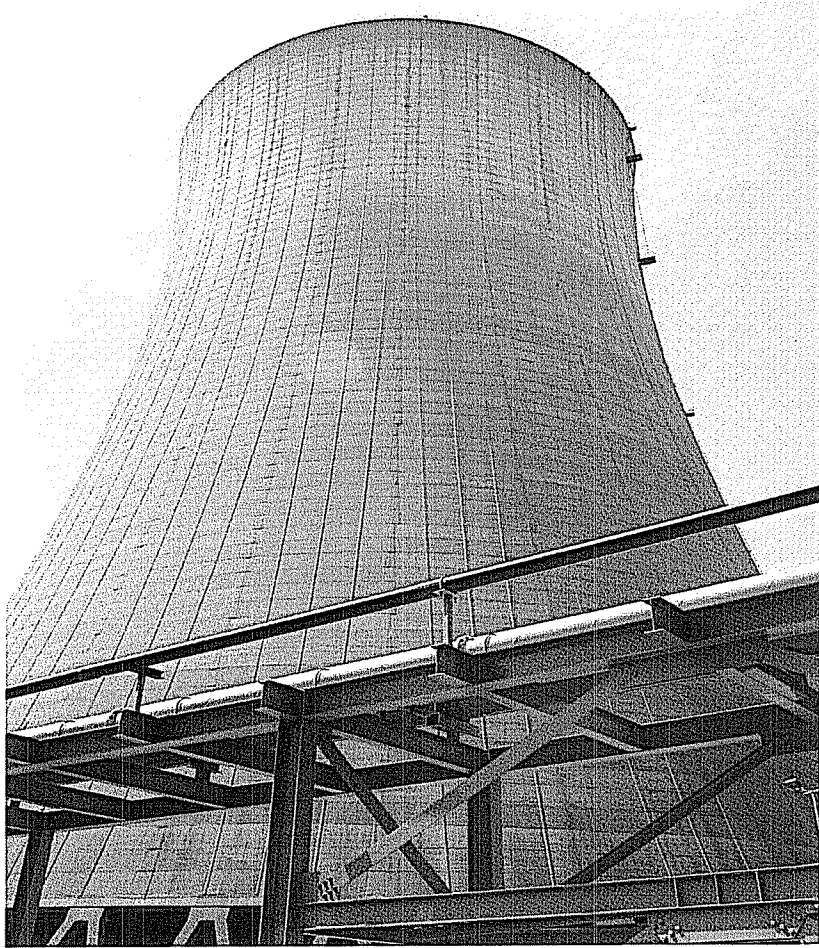
Interior view of Trimble Unit 2



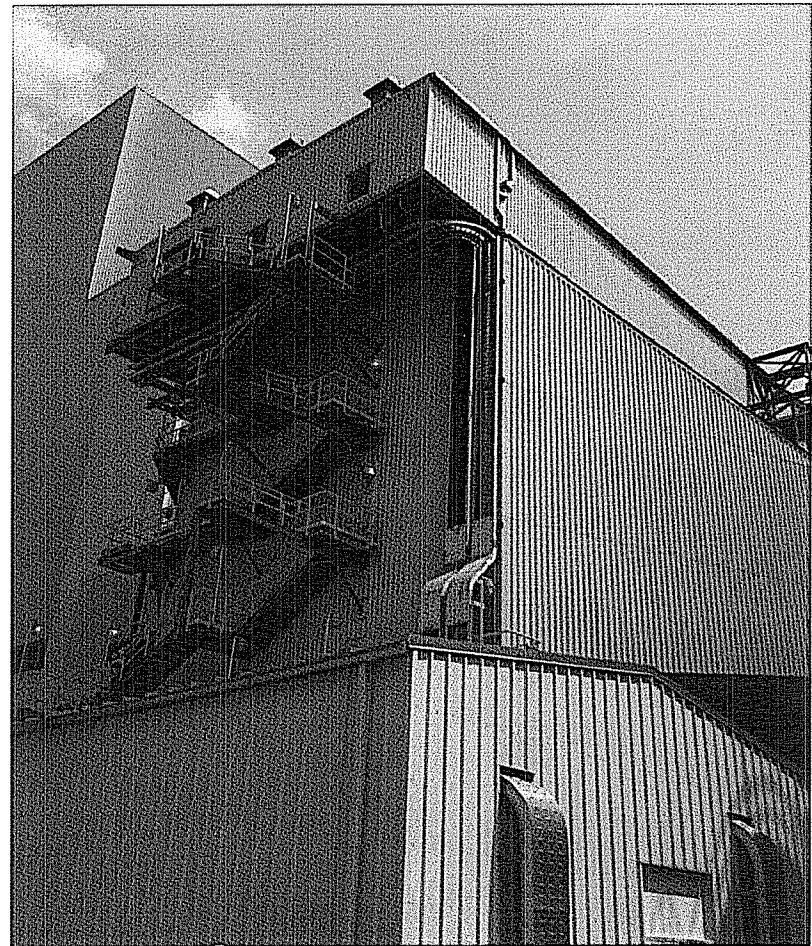
Pulverized coal feeder unit



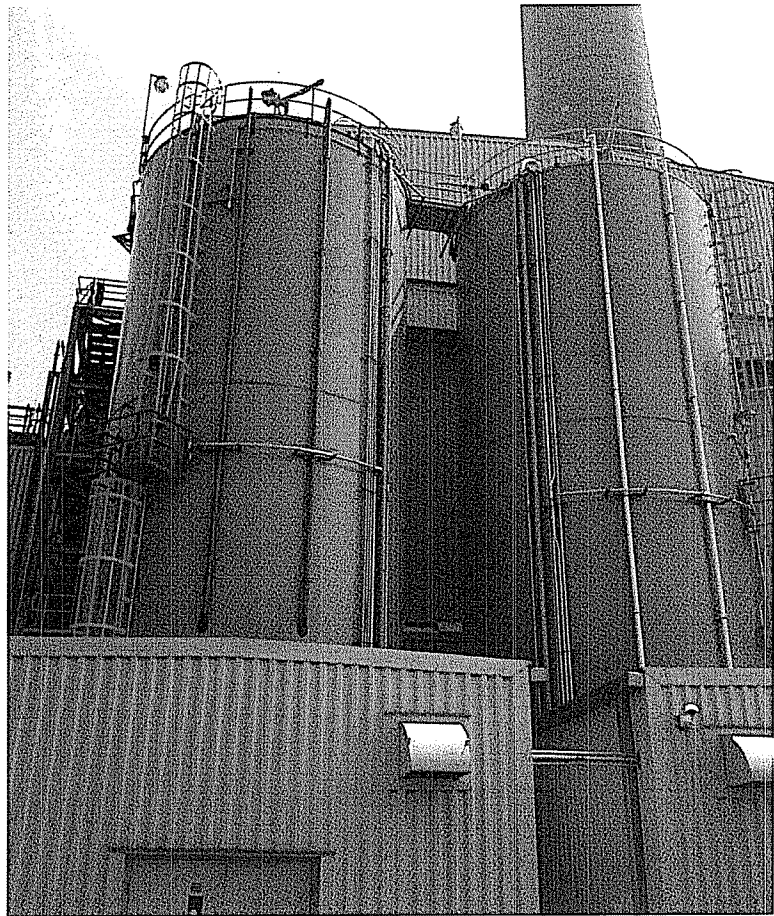
Coal feeding vent



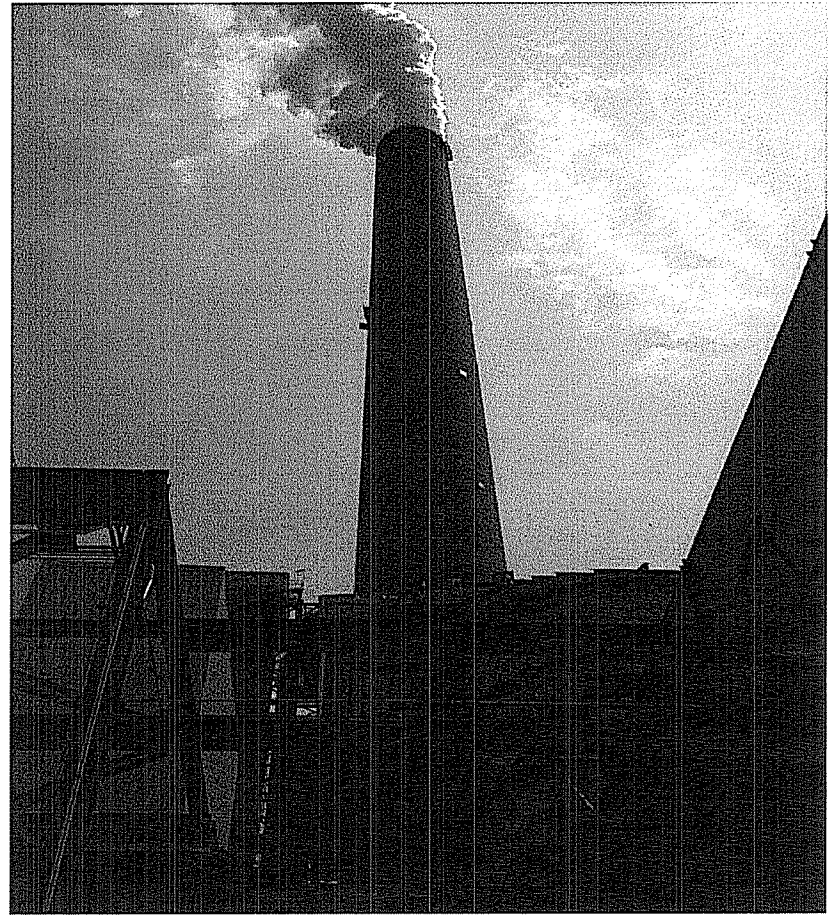
Cooling Tower



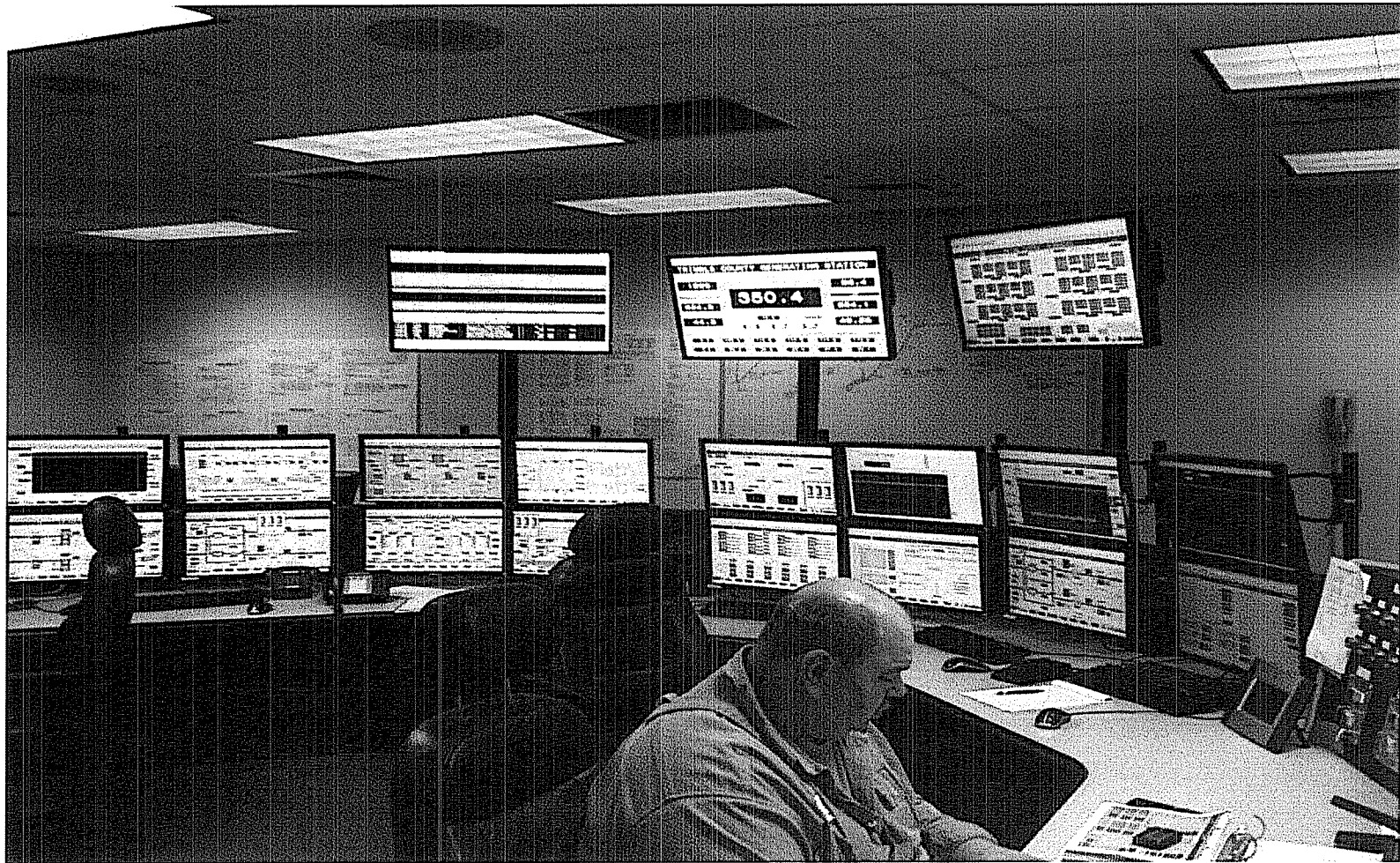
Exterior of Selective Catalytic Reduction (SCR) Unit
(NO_x removal)



Exterior of Baghouse Unit (particulate removal)

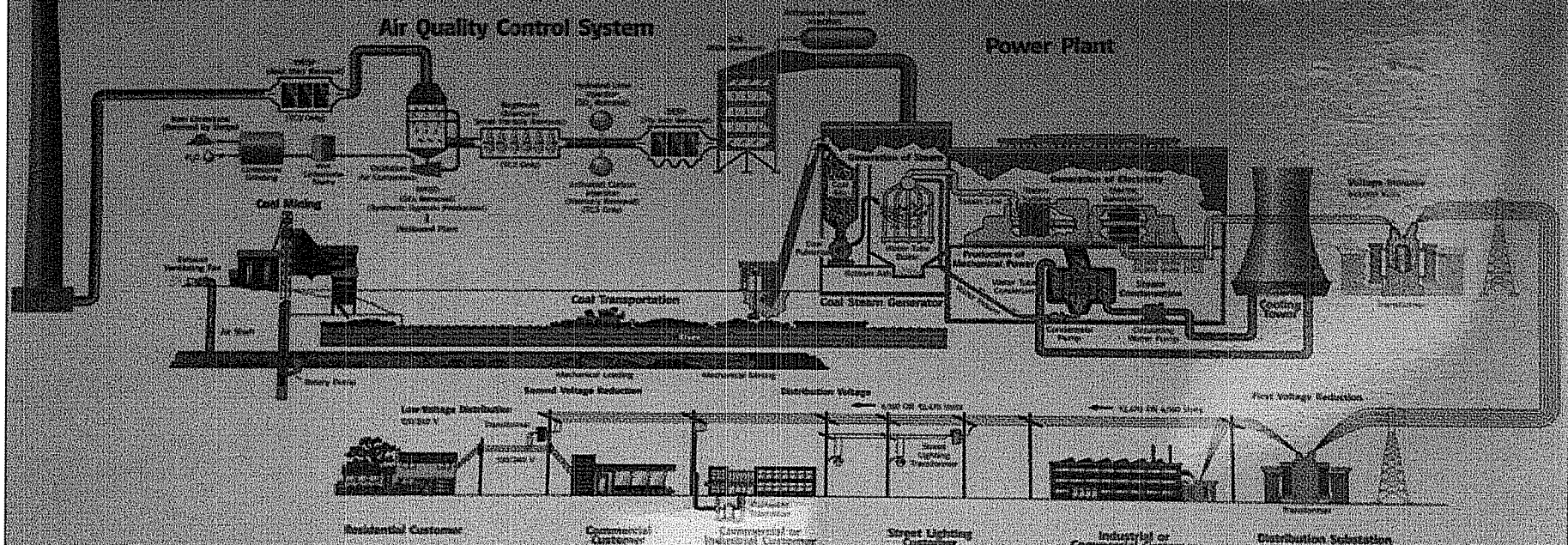


TC Emissions Stack (shared by both units)



Trimble County Control Room

Trimble County Station — From Coal to Pole



Parameter	TC1 (2000)	TC2 (2000)	General Plant
Unit Rating (MW)	507 (gross), 335 (net)	512 (gross), 330 (net)	<ul style="list-style-type: none"> • Site more than 2,000 acres • 1,000 acres developed • 134-acre wildlife preserve • 92 acres not plowed
Heat Rate (Btu/MWh)	22,400 (net)	5,042 (gross)	<ul style="list-style-type: none"> • Currently 125 full-time employees (plus 30-25 full-time contracted employees) • Anticipate 140-150 full-time employees after TC2 is commissioned
Unit Efficiency (%)	39	40	<ul style="list-style-type: none"> • TC1 and TC2 are jointly owned (50% with the Illinois Municipal Electric Agency and the Indiana Municipal Power Agency)
Unit Auxiliary Use (%)	6 - 7	5 - 7	<ul style="list-style-type: none"> • in addition to TC1 and TC2 coal-fired units, the station also has six GE7FA combustion turbines rated at 132 MW each (912 MW total)
Primary Fuel	Eastern Subbituminous Coal	Blend of Eastern Subbituminous Coal and Western Sub-Bituminous (PBR) Coal	
Main Steam Pressure (psig)	2,400	2,400	
Main Steam Temperature (F)	1,005	1,025	
Main Steam Flow (lbs/hr)	4,000,000	5,150,000	
Boiler Manufacturer	Combustion Engineering (Kewanee)	Combustion Engineering	
Turbine Manufacturer	General Electric	General Electric	
Air Quality Control System (AQCS)	Combustion Engineering (Hickory)	Wabashville (Kewanee)	

IG&E KU
PPL companies

Diagram of Trimble County Processes

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF THE ILLINOIS)
MUNICIPAL ELECTRIC AGENCY AND THE)
INDIANA MUNICIPAL POWER AGENCY FOR) CASE NO.
APPROVAL TO BE A 25% PARTNER IN THE) 2005-00152
CONSTRUCTION OF A 750 MEGAWATT)
ADDITION TO THE EXISTING TRIMBLE)
COUNTY GENERATING FACILITY IN TRIMBLE)
COUNTY, KENTUCKY)

May 11, 2011

Please sign in:

NAME	REPRESENTING
<u>Rick Bertelson</u>	<u>Siting Board - Legal</u>
<u>ELIE RUSSELL</u>	<u>" " Eng.</u>
<u>Tom Gardner</u>	<u>PSC</u>
<u>Charles Bowden</u>	<u>PSC</u>
<u>Bruce Rawles</u>	<u>PSC - GIS</u>
<u>KANDY STEVENS</u>	<u>T.C. JUDGE / EXEC.</u>
<u>Robert Conroy</u>	<u>LG+E / KU</u>
<u>Alyson Sturgeon</u>	<u>LG+E / KU</u>
<u>Lonnie Bellon</u>	<u>LG+E / KU</u>
<u>George Buagous</u>	<u>KY CABINET for Economic Dev.</u>
<u>Len Peters</u>	<u>KY Energy + Environment Cabinet</u>
<u>RALPH BOWLING</u>	<u>LG+E / KU</u>

NAME

REPRESENTING

Bob Amato

Ky DEDI

Kevin Wagner

IMEA

John Kipper

LGFE

Jack Alvey

IMPA

WESLEY V. MOLL

LGFE

RICK LOVEKAMP

LGFE/KU

TOM CRUTCHER

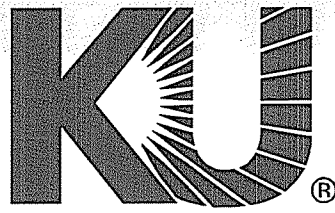
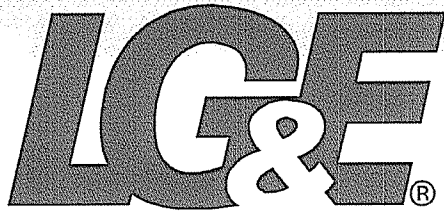
LGFE

SCOTT STRAIGHT

LGFE/KU

JOHN VOYLES

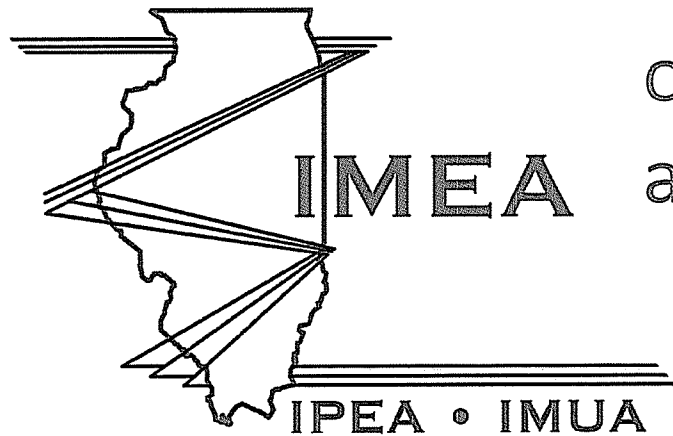
LGFE/KU



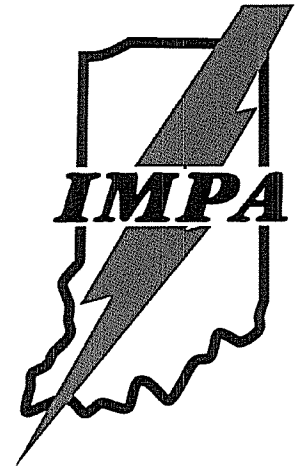
PPL companies

Trimble County 2 Site Visit

Kentucky State Board
on Electric Generation
and Transmission Siting

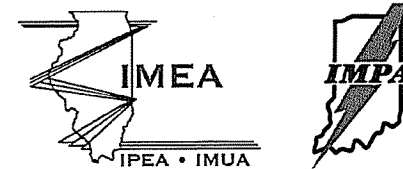


May 11, 2011



Agenda

- Introductions
- TC2 Project Timeline
- TC2 Facts and Figures
- TC2 Overview
- Site Assessment Parameters and Siting Board Mitigation Conditions
- Tour Overview
- Tour



Introductions

LG&E/KU

- Lonnie Bellar, VP State Regulation & Rates
- Ralph Bowling, VP Power Production
- Robert Conroy, Director Rates
- Tom Crutcher, General Manager – Trimble
- Rick Lovekamp, Manager Regulatory Affairs
- Scott Straight, Director Project Engineering
- Allyson Sturgeon, Sr. Corporate Attorney
- John Voyles, VP Transmission & Generation Services

IMPA

- Jack Alvey, Senior Vice President-Generation

IMEA

- Kevin Wagner, Vice President Engineering



TC2 Project Timeline

- 11/1/2005 – Kentucky Public Service Commission approves LG&E/KU's application to construct 750 MW super-critical pulverized-coal base load unit
- 11/16/2005 – Kentucky Siting Board approves IMEA's and IMPA's joint application (Case No. 2005-00152) to construct their 25 percent undivided interest in TC2
- June 2006 – Agreement reached with Bechtel Power Corporation to serve as Engineering, Procurement and Construction contractor for TC2



TC2 Project Timeline

- 2/15/2010 – First fire on fuel oil
- 4/15/2010 – Steam blows completed
- 5/17/2010 – First fire on coal
- 5/18/2010 – First synchronization
- 10/27/2010 – First time to 100% Rated Output
- 1/22/2011 – Commercial Operation



TC2 Facts and Figures

- 3,200 employees at the peak of construction
- Over 11.5 million man-hours worked on-site
- OSHA Recordable Incident Rate (RIR) of 2.45
- \$52 million of MBE / WBE Project Spend
- Addition of approximately 75 Full-Time Jobs for Plant Operation and Maintenance



TC2 Overview

- 760.5 MW net rating
- Extremely low emissions per MWh for coal-generation in nation
- First to employ both dry and wet electrostatic precipitator technology in KY
- Received \$125 million tax credit for clean coal for KY ratepayers



TC2 Overview

State of the Art Environmental Systems

- Low NO_x Boiler Burners and Selective Catalytic Reduction (SCR) – **NO_x Reduction**
- Dry Electrostatic Precipitator (DESP) – **Particulate Reduction**
- Pulse Jet Fabric Filter (PJFF) – **Fine Particulate Removal, including Mercury**
- Flue Gas De-Sulfurization (FGD) – **SO₂ Removal**
- Wet Electrostatic Precipitator (WESP) – **Acid Mist Removal**



TC2 Overview

TC1 and TC2 Common Equipment

- Use of existing **common chimney** for both TC1 and TC2
- Use of existing **coal barge unloading and conveyor system** (with coal blending facilities added on TC2 project)
- Use of existing **limestone barge unloading and FGD Reactant Preparation System** (Limestone grinding)
- Use of existing **service water system** (with upgrade)
- Use of (new with TC2 project) **common auxiliary boiler**
- Use of **common control room and administrative offices**

Site Assessment Parameters and Siting Board Mitigation Conditions

- Height of new structures are consistent with height of existing structures
- Installed a new mechanical draft-cooling tower for TC1 to allow TC2 to utilize the larger existing hyperbolic tower
- Use of existing chimney shell for both TC1 and TC2
- Colors and lighting of TC2 are consistent with TC1
- Silencers installed for steam blows

Tour Overview

- Common TC1/TC2 control room
- Turbine room
- Coal Mills
- Boiler room
- Environmental Systems
 - Selective Catalytic Reduction (SCR)
 - Dry Electrostatic Precipitator (DESP)
 - Pulse Jet Fabric Filter (Baghouse)
 - Flue Gas De-Sulfurization (FGD)
 - Wet Electrostatic Precipitator (WESP)
 - Chimney
- Hyperbolic Cooling Tower