

Missouri Public Service Gas Turbine & Renewable Generation

- Maryland Heights Renewable Energy Center
- Venice Energy Center



Agenda

June 27, 2013

- Working lunch
 - Introductions of Commission and Ameren Staff
 - **Safety Briefing**
 - Overview of Ameren Missouri Gas Turbine Fleet
 - Overview of Maryland Heights Renewable Energy Center
- Walking Tour – MHREC
- Wrap up/Questions on MHREC

Travel to Venice

- Introductions of Commission and Venice Staff, **Venice**
Safety Briefing
- Description & History of Venice Energy Center
- Tour of Venice Energy Center
- Tour/Wrap up discussion

Gas Turbine & Renewable Generation Fleet FAQ's

- ~3,000 MW Capacity
- 15 sites, 10 Missouri, 5 Illinois
- 8 Staffed Sites
- 40 employees
- 10 Years - Zero Employee Injuries
- Local and Remote Automated Operation
- 48 Units with capacity ranges from 5 to 180 MW

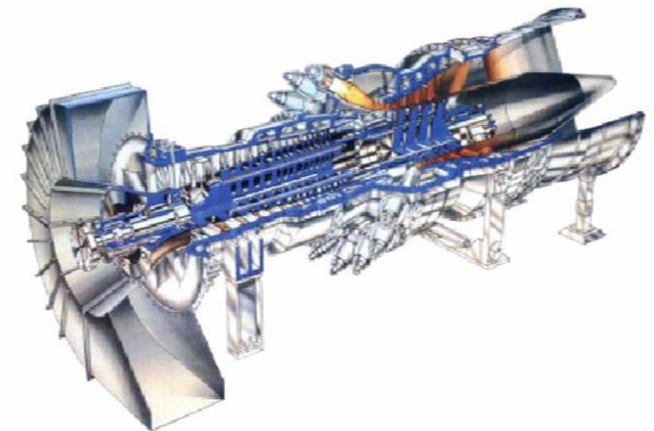
Gas Turbine & Renewable Generation Fleet Map



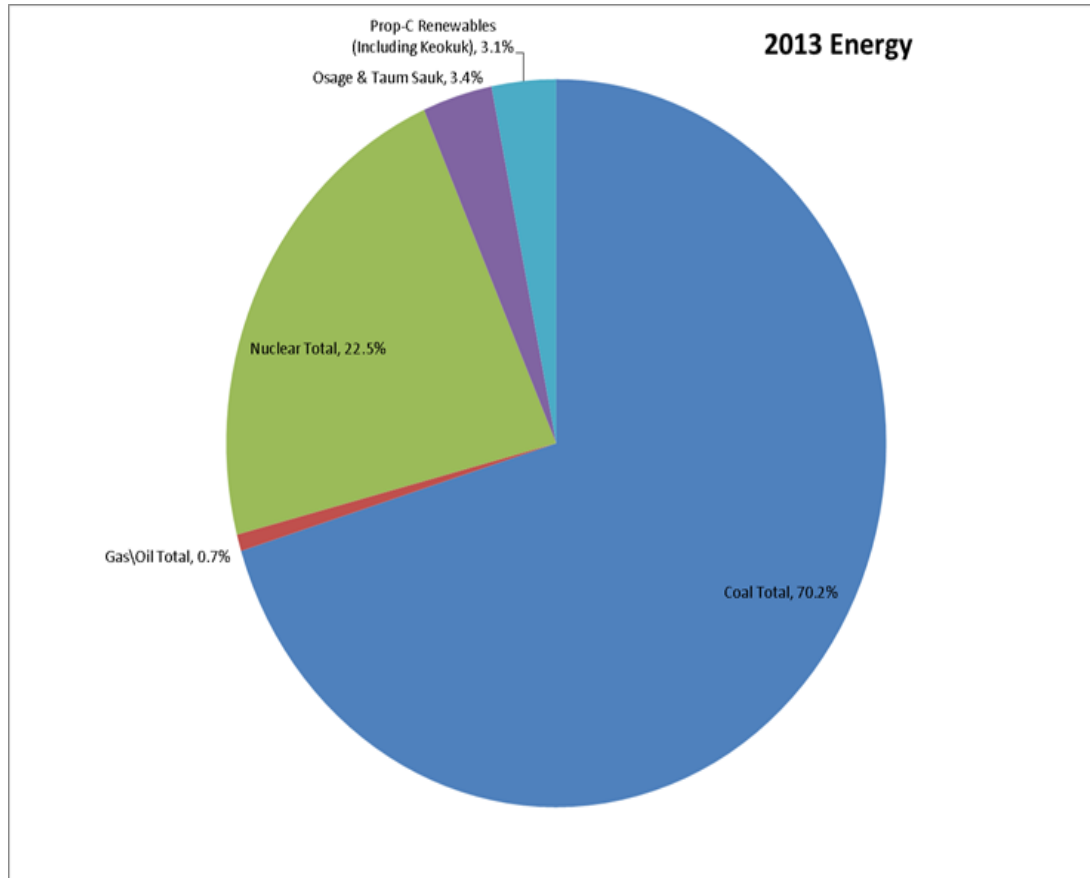
- a. 3,156 MW Capacity
- b. 15 sites, 8 staffed
- c. 10 Missouri, 5 Illinois
- d. 42 team members
- e. 10 Years Zero Employee Injuries
- f. Local and Remote Automated Operation
- g. 47 Generating Units, natural gas, methane and fuel oil
- h. Capacity ranges from 5 MW to 180 MW

Fleet of diverse manufacturer, capacity, vintage, technology

Plant	# of Units	Date	Capacity	OEM
Audrain	8	2001	600MW	GE
Venice	4	2005	500 MW	Siemens
Goose Creek	6	2003	450MW	GE
Pinckneyville	8	2001	320 MW	GE
Raccoon Creek	4	2002	300 MW	GE
Kinmundy	2	2003	234MW	Siemens
Peno Creek	4	2002	192 MW	Pratt
Meramec	2	1974/2000	120 MW	GE/PW
Regionals	5	67'-77'	252 MW	GE
Howard Bend	1	1973	45 MW	Pratt
Maryland Heights	3	2012	12 MW	Solar



2013 Portfolio w/Natural Gas



Capacity (2013)

Coal 51.5%

Gas/Oil 28.1%

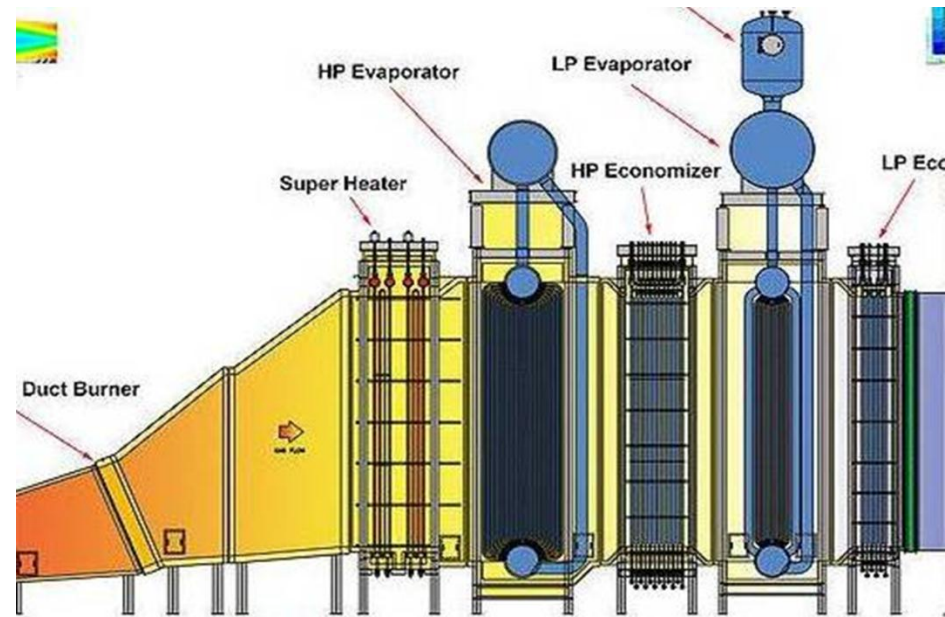
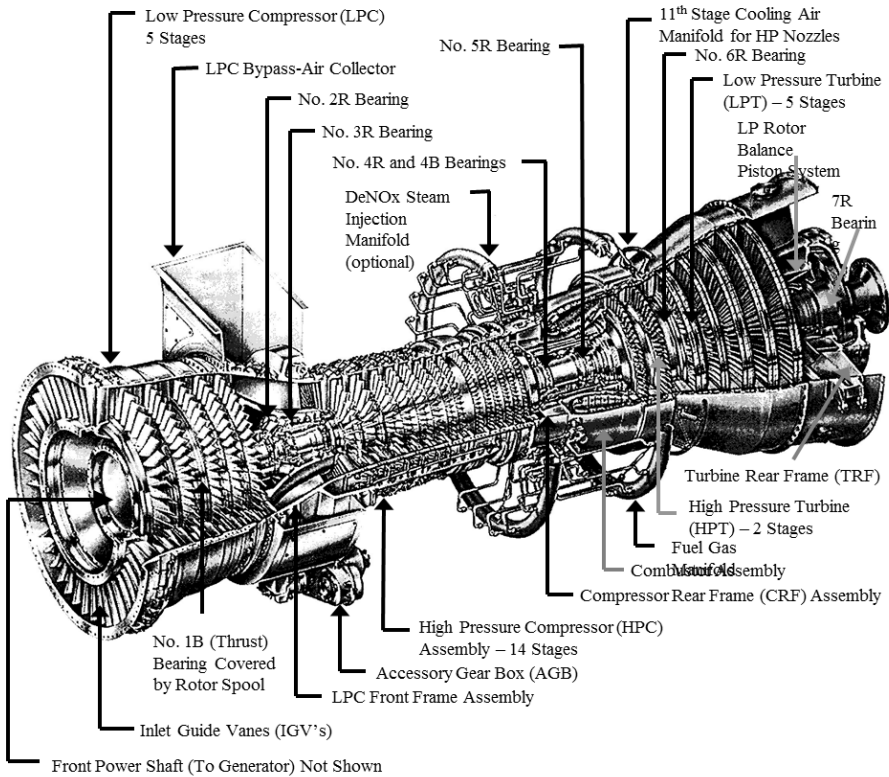
Nuclear 11.4%

Osage & Taum Sauk 6.5%

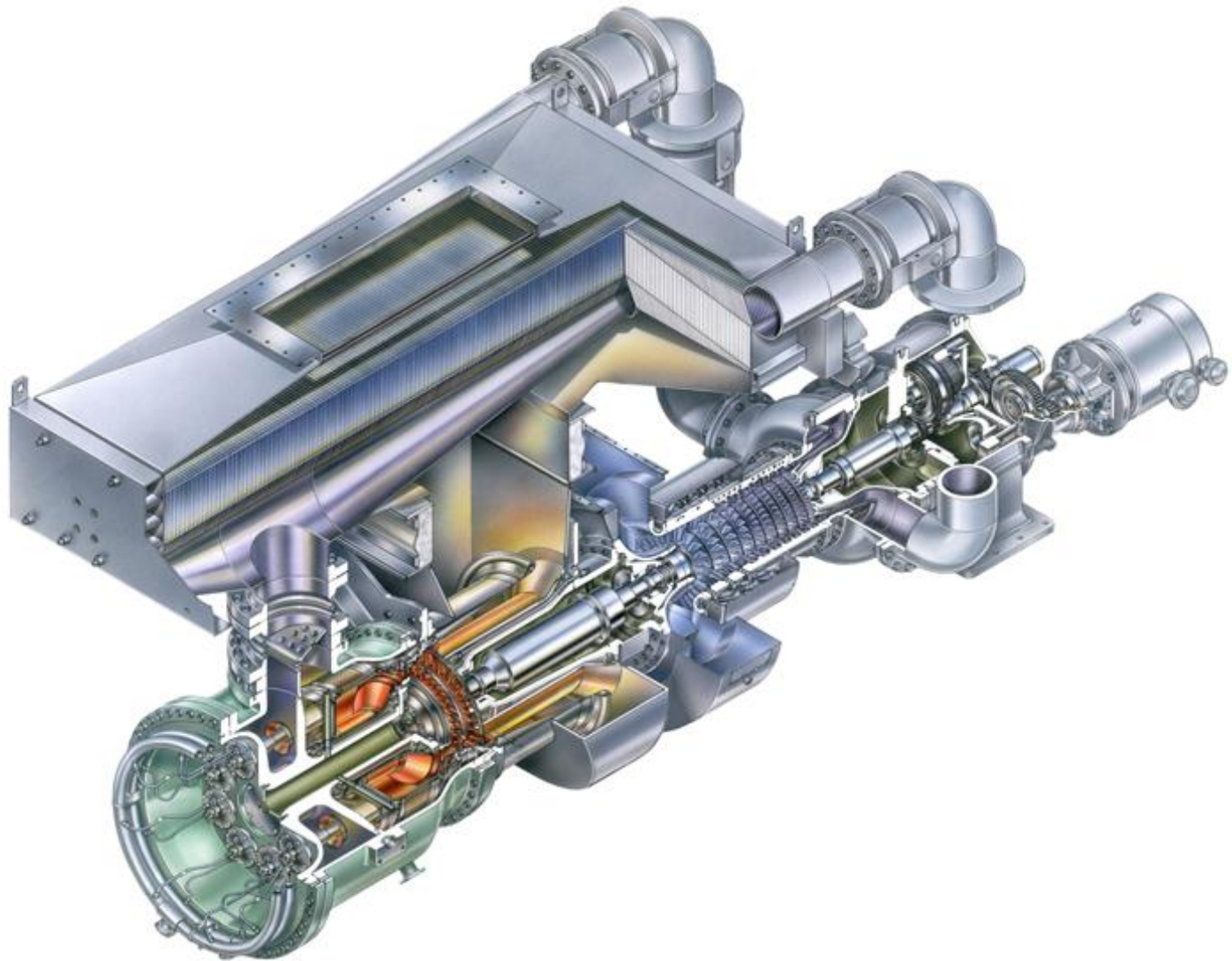
Renewables (Includes Keokuk) 2.5%

Electricity from Jet Engine Technology

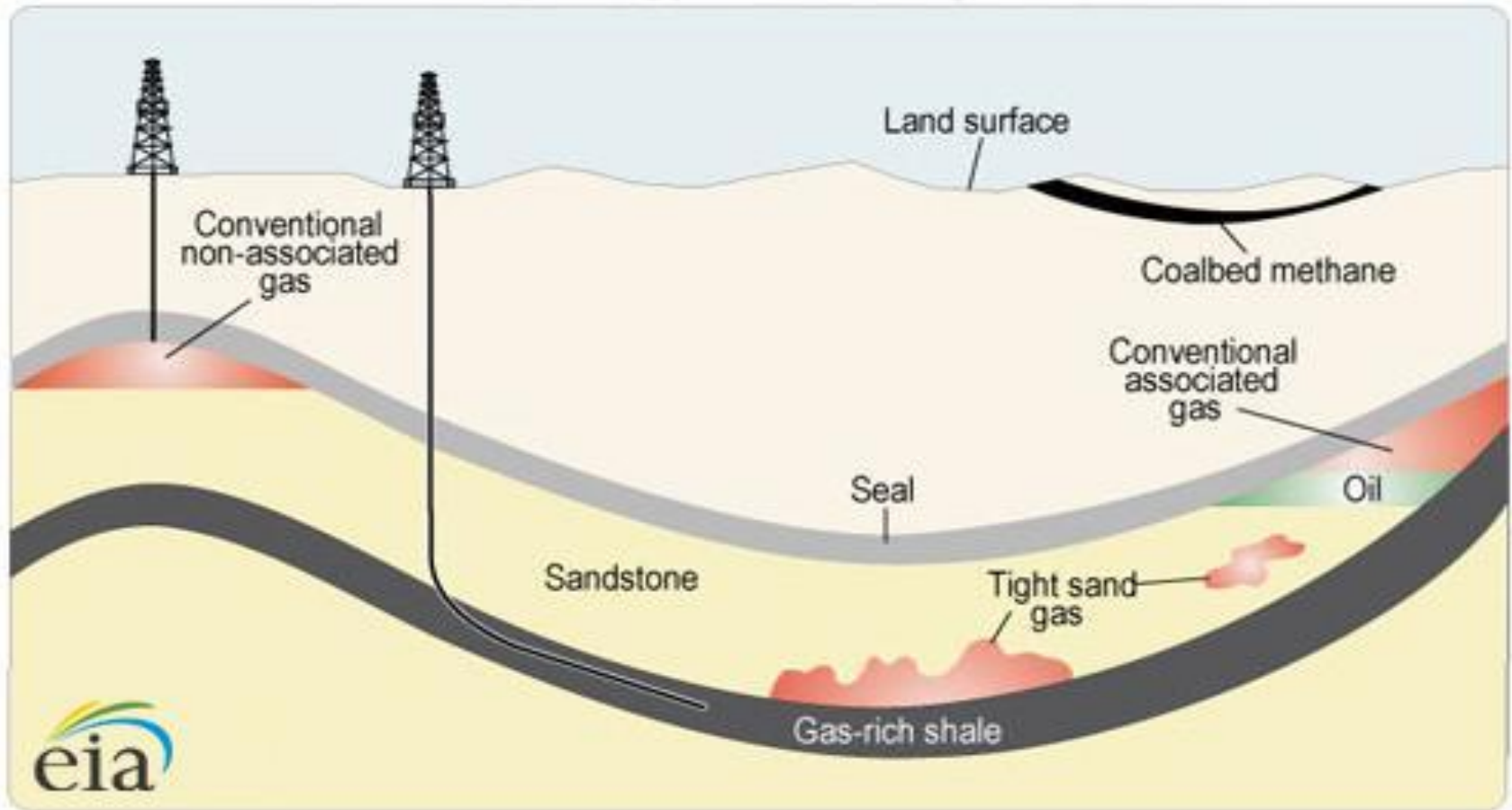
Simple Cycle, Combined Cycle Peaking/Intermediate/Baseload



Electricity from 100% renewable sources

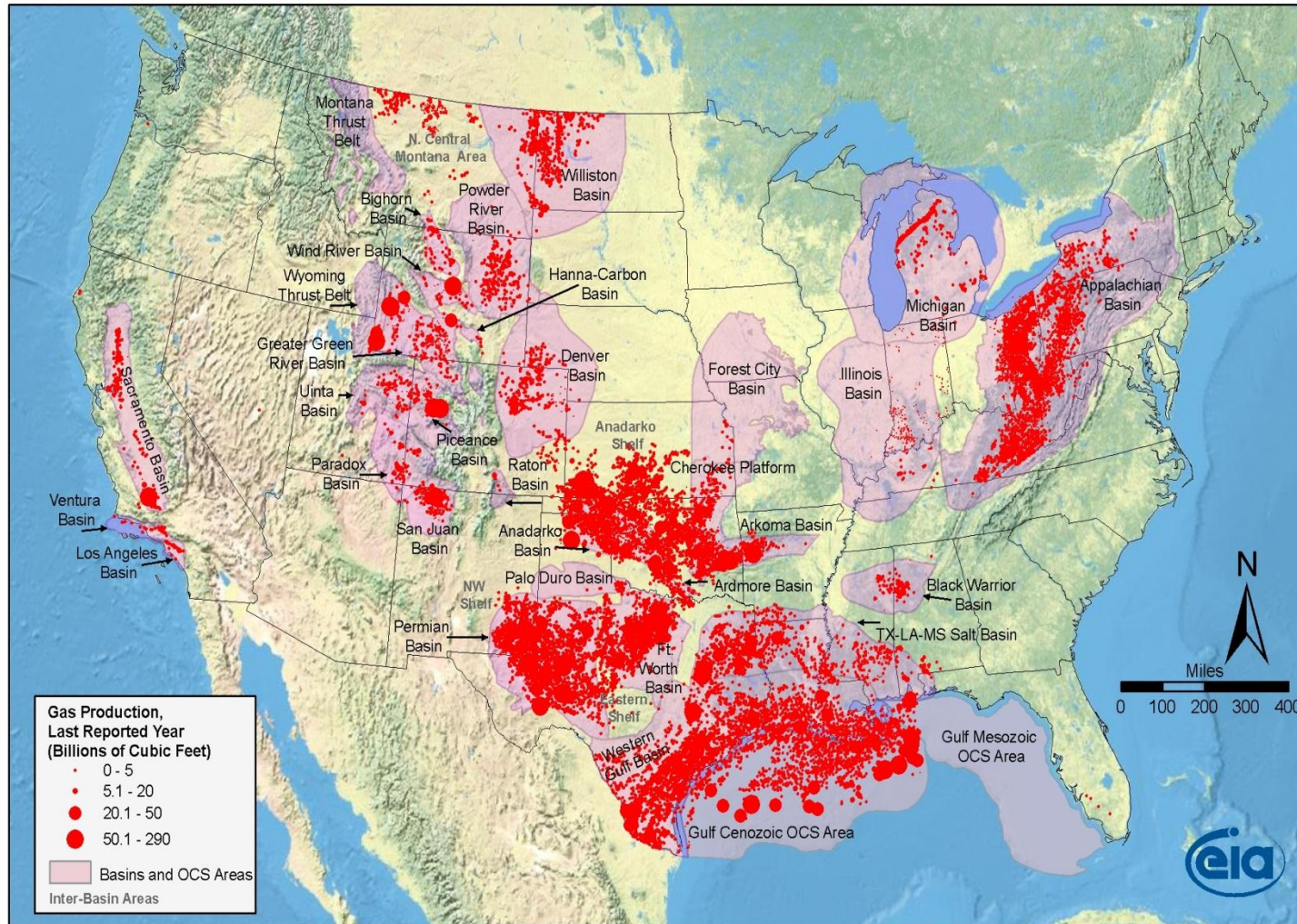


Natural Gas Supply - Sources



American Natural Gas Supply

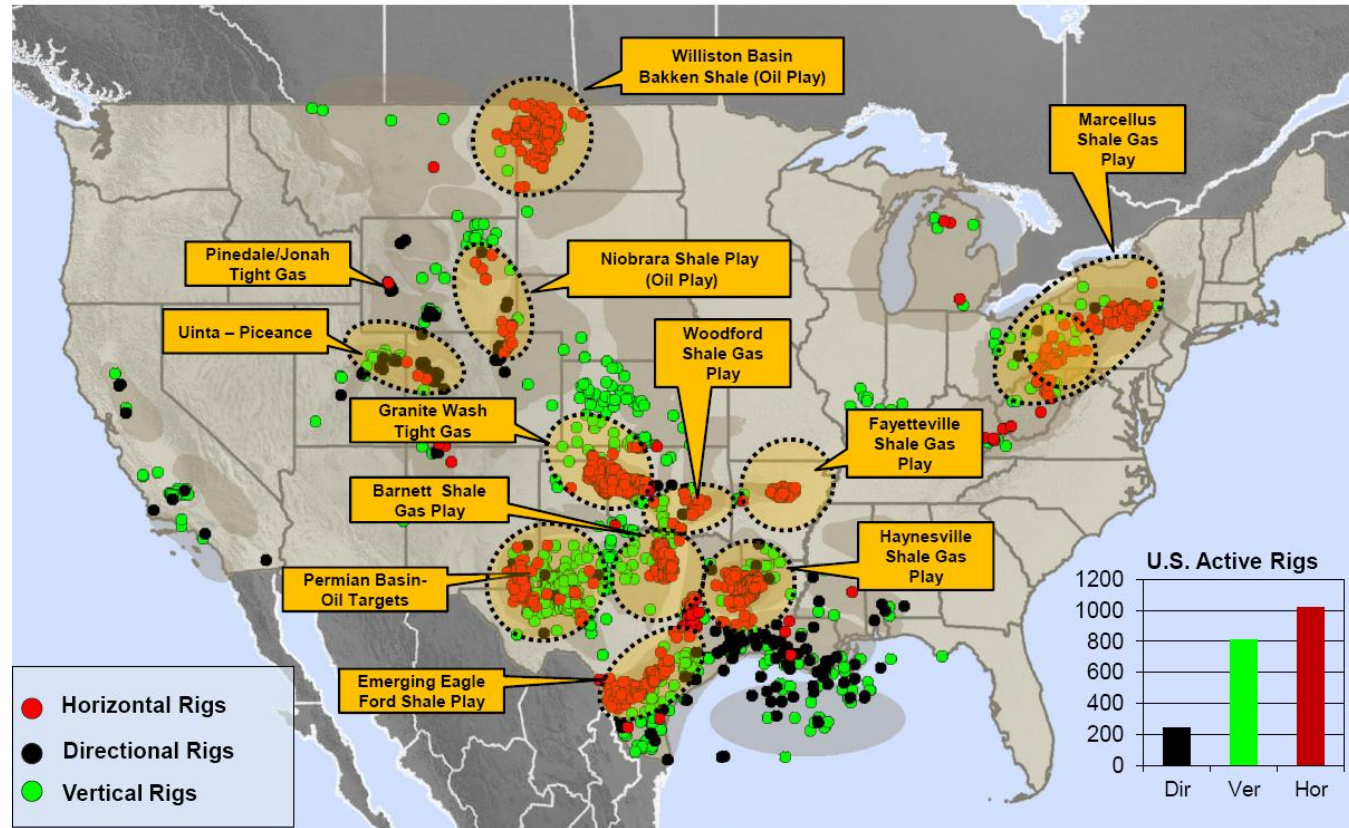
Gas Production in Conventional Fields, Lower 48 States



Source: Energy Information Administration based on data from HPDI, IN Geological Survey, USGS
 Updated: April 8, 2009

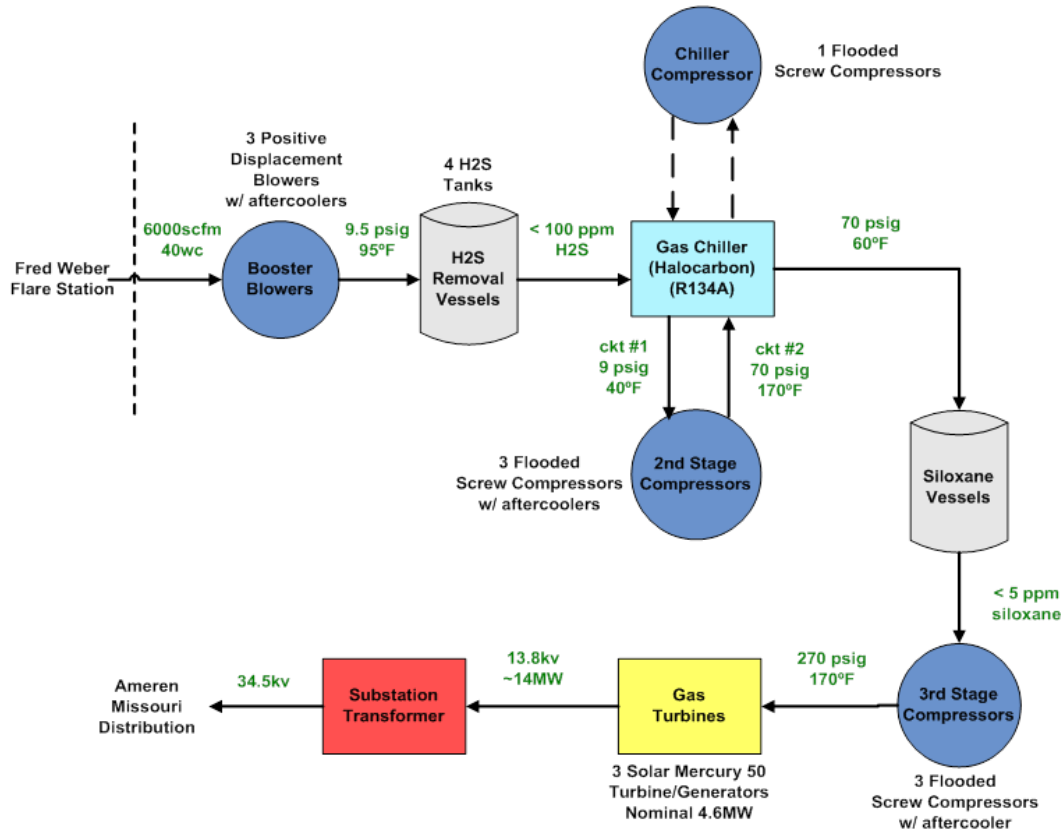
American Natural Gas Supply

- Significant growth of unconventional shale tight sands and coal bed methane reserves.



Electricity from 100% renewable sources

Methane to MW – Mike Whitmore, Plant Supt.



- Ameren's newest Energy Center
- First of a Kind Project
- Detailed Selection, Initiation, & Construction of energy center
- Recipient Project of the Year by PMI
- Engineering Excellence Award by American Council of Engineering Companies
- Zero lost time accidents
- Construction & Permanent jobs
- Academic partner with Pattonville Sr. High School

Venice Energy Center

- Agenda
- Venice Introductions
- Venice Safety Briefing
- History of Venice Energy Center
- Description of current Venice Energy Center
- Venice Energy Center Tour

Venice Safety Briefing and energy center overview



History of Venice Energy Center

1. Venice Coal Plant #1,
from 1910 to 1980's
2. Venice Coal Plant #2
from 1943 to 2003
3. Venice natural gas era
#1: from 1977
4. Venice Gas Turbine era
#2, 2005 - present

