The Federal Power Commission and Regional Entities (RE) were the precursors to NERC.
• On November 9, 1965 there was a large black out in the Northeast
  ▪ 30 million people were affected
  ▪ It is estimated that $100 million in economic losses occurred
• In 1967 a Federal Power Commission investigation recommended forming a “council on power coordination”
• In 1968 the Regional Entities formed the North American Electric Reliability Corporation (NERC)
• In 1982 a committee of industry experts created the Generating Availability Data System (GADS)
What is GADS?

- **G** - Generating
- **A** - Availability
- **D** - Data
- **S** - System
The GADS Databases

• **Design**
  - Nine required fields that uniquely identify the generating unit
  - Plus voluntary fields that describe the equipment on the unit

• **Event**
  - Description of equipment failures using coded events to record the details of the problem and the cause

• **Performance**
  - Summaries of installed capacity, generation produced, fuel quantities burned, and start ups
• GADS maintains
  ▪ Installed capacity (potential generation)
  ▪ Performance History (actual generation)
  ▪ Equipment problems (outages and derates = lost generation)

• GADS is an equipment database and is only interested in the reliability, availability, and maintainability of the installed equipment

• Dispatch requirements and needs play no part
• Generator owners are required by law to collect and report GADS data to NERC as outlined in the GADS Data Reporting Instructions (DRI)
  - [http://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx](http://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx)
  - The DRI describes how to report design, event and performance data
  - Units 50 MW and larger started January 1, 2012
  - Units 20 MW and larger started January 1, 2013

• Generator Owners not listed on NERC’s Compliance Registry (NCR) may report to GADS on a voluntary basis

• All smaller MW units are invited to report voluntarily
Conventional Generating Unit Types

1. Combined Cycle Gas Turbine
2. Combined Cycle Steam Turbine
3. Co-Generation Gas Turbine
4. Co-Generation Steam Turbine
5. Co-Generation Block
6. Combined Cycle Block
7. Fluidized Bed
8. Fossil-Steam
9. Gas Turbine/Jet Engine (Simple Cycle Operation)
10. Geothermal
11. Internal Combustion/Reciprocating Engines
12. Miscellaneous (variations on the other types)
13. Multi-boiler/Multi-turbine
14. Nuclear
15. Pumped Storage/Hydro
Note On Common Metered Units

Treat as Normal Units

- 10 MW
- 10 MW
- 10 MW
- 10 MW
- 10 MW

Treat as a “Miscellaneous Unit” if the sum is over 20 MW

- 10 MW
- 10 MW
- 10 MW
- 10 MW
- 10 MW
Problem: You are a new employee within the electric industry and you are given the task of preparing a survey of all the units in your company by type.

Question: Which of the following is not a conventional unit?

A. Combined Cycle Gas Turbine
B. Fossil Steam
C. Miscellaneous
D. Nuclear
E. Wind Farm
• Each company is responsible for reporting the GADS design, event, and performance data on its units
  ▪ Collection
  ▪ Validation
  ▪ Correction
  ▪ Updating

• In-house audits of GADS data before submitting it to NERC by each reporting generating company have always been strongly encouraged
Ownership/ Retirement Tracking

• GADS tracks generating ownership/retirement changes
  ▪ Changes include
    o Name of the new owners and
    o Date of generating unit transfer
    o Date of generating unit retirement
    o See Appendix A for details

• GADS does not track proposed or projected generating unit retirement dates
Questions and Answers