

ERTAC Tool Logic and Flowcharts



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PRESENTATION OVERVIEW

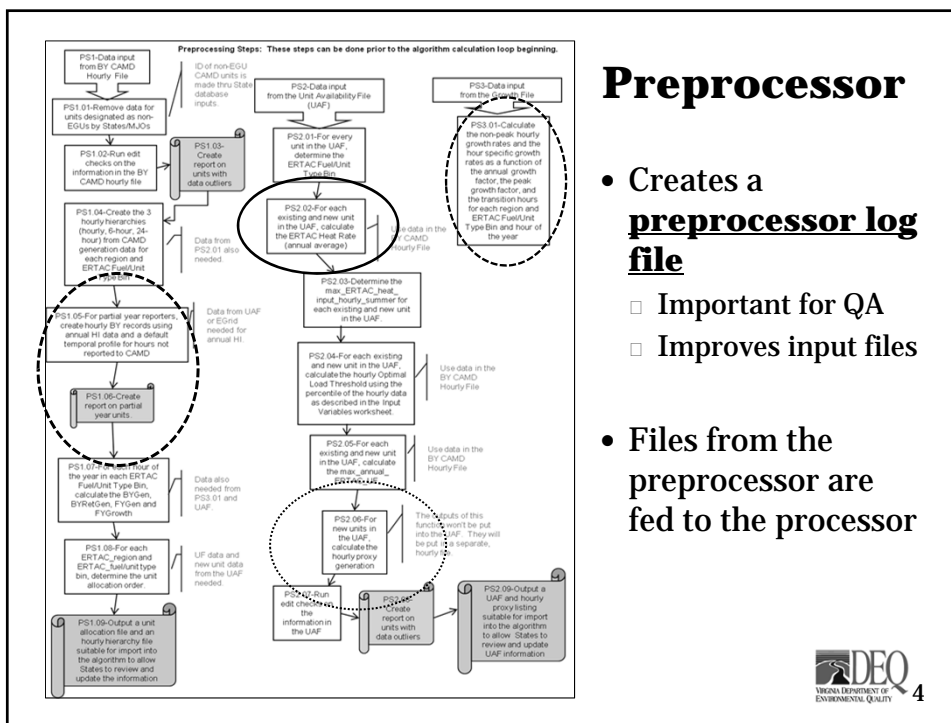


- **Preprocessor Functions**
 - Data QA
 - Data manipulations
 - Calculations
- **Projection Processor Functions**
 - Generation calculations
 - Generation deficit units defined, if needed
 - Excess power redistribution-Two step process
 - Emission calculations
 - Outputs
- **Post Processors**
- **Questions?**



Preprocessor Functions

- Need for preprocessing
- Preprocessing allows improved projection outputs
- Basic functions:
 - Hourly CAMD data update to remove non-EGUs
 - Examine data outliers
 - Sets up base year (BY) structure
 - Examines input files



Preprocessor

- Creates a **preprocessor log file**
 - Important for QA
 - Improves input files
- Files from the preprocessor are fed to the processor

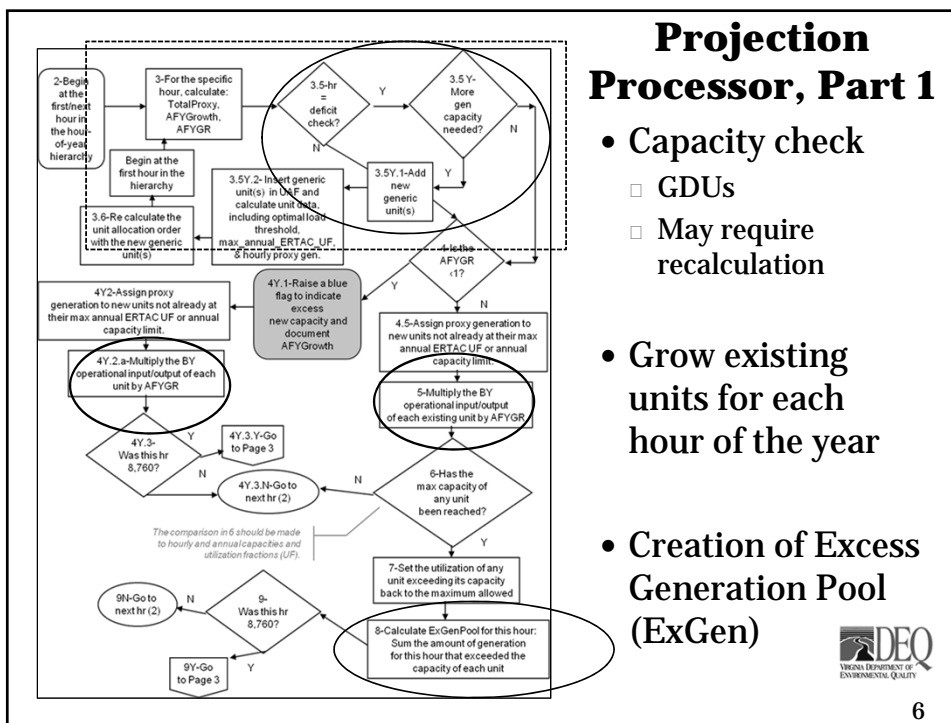


Projection Processor, Part 1

- Calculates future generation
 - By region and fuel/unit type
 - Outputs are modular
- Capacity deficit check
 - May generate generation deficit units
 - Treated as new units, with profiles
- Grows all existing units based on hourly growth rates
- Determines if there is excess generation in any hour

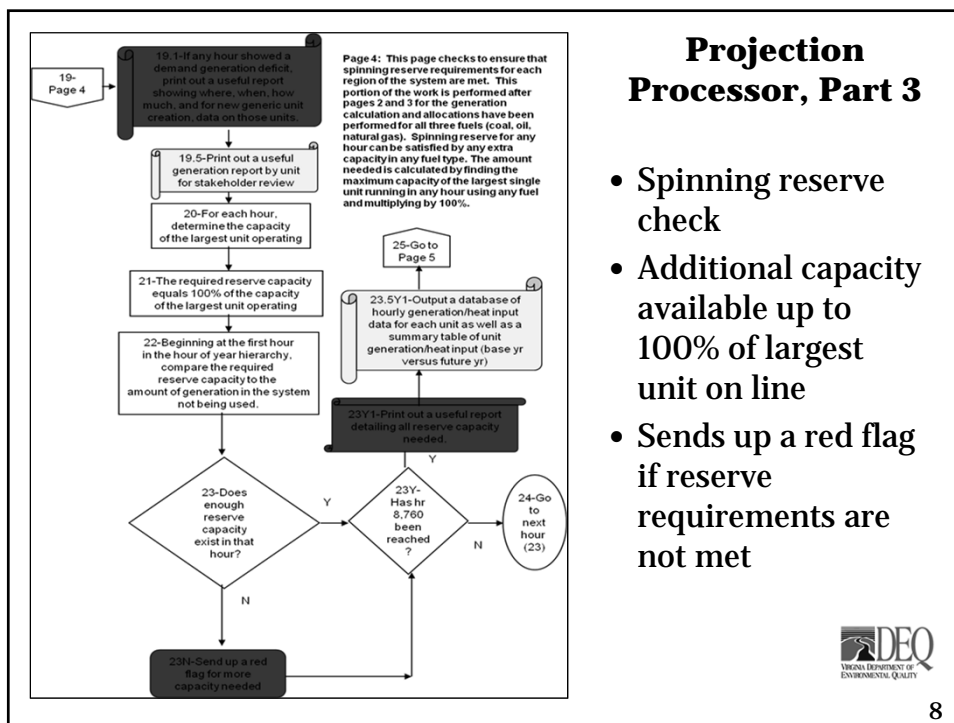
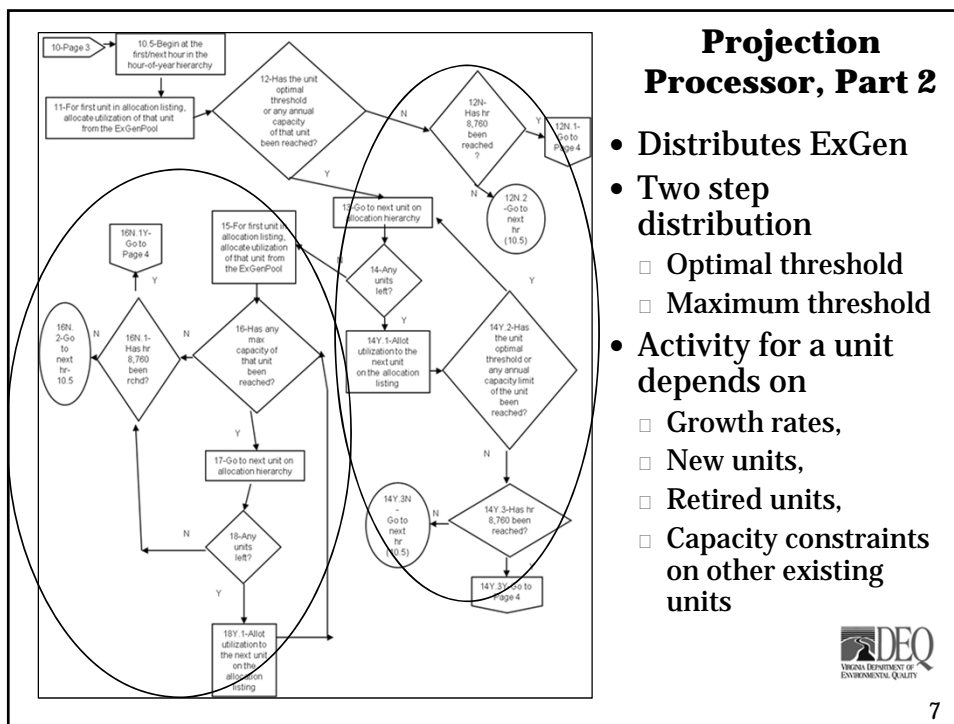


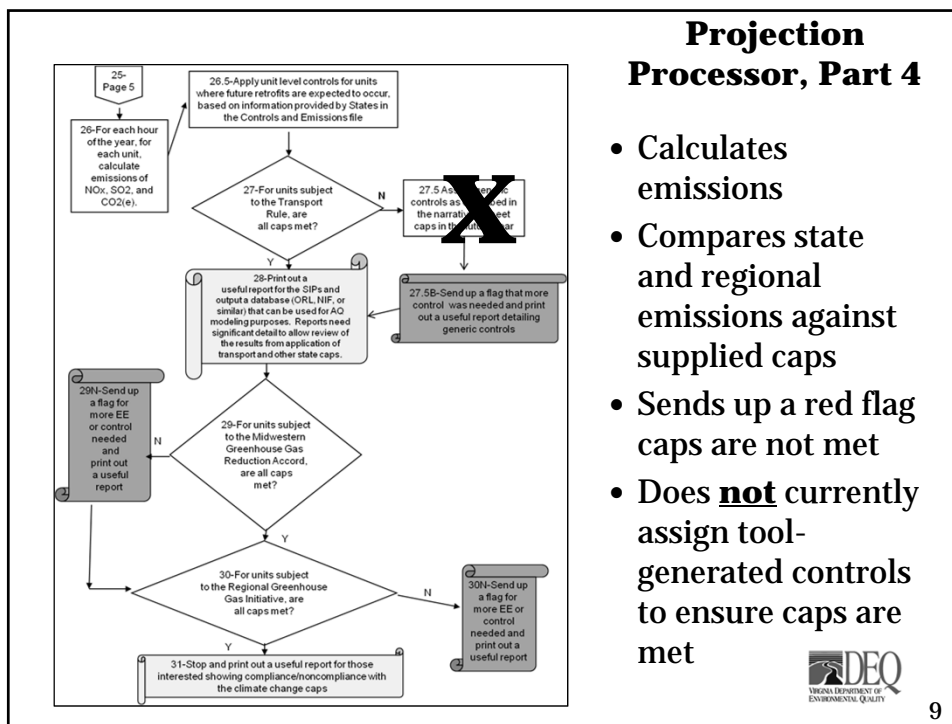
Projection Processor, Part 1



- Capacity check
 - GDUs
 - May require recalculation
- Grow existing units for each hour of the year
- Creation of Excess Generation Pool (ExGen)







Projection Processor Notes

- Future year (FY) activity is firmly grounded in BY meteorology
- Many FY estimates may be adjusted by region and fuel unit type bin in the input_variables
- NonCAMD units may be included IF:
 - Hourly BY activity data in a CAMD-like format exists
 - AEO/NERC growth rates are applicable to the unit
- Creates a **processor log file**
- Output files are quite large (hourly data):
 - 3,000-4,000 units, most with 8,760 hours of data;
 - Input and output files each several gigabytes (about 16 GB total)

Post Processors



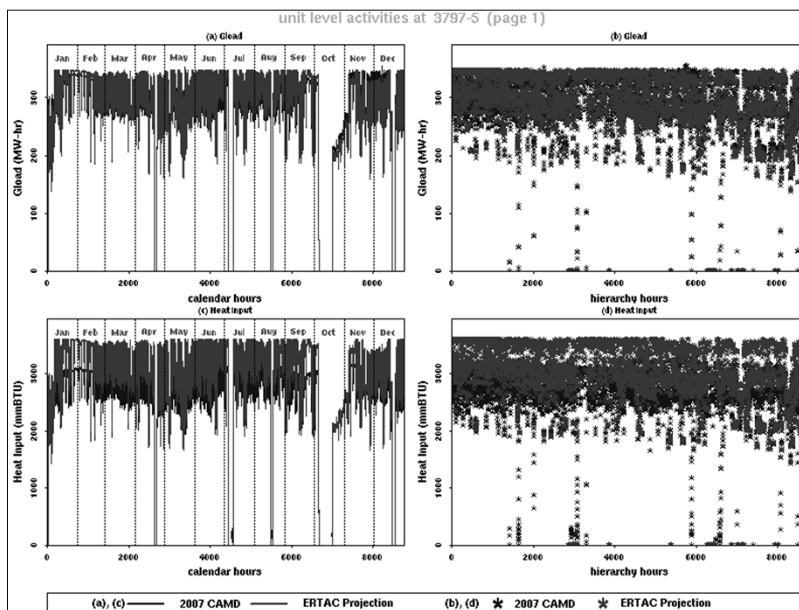
- Several have been developed
- Aids in data review and trouble shooting
- Output files are large, but can be manipulated in very interesting ways

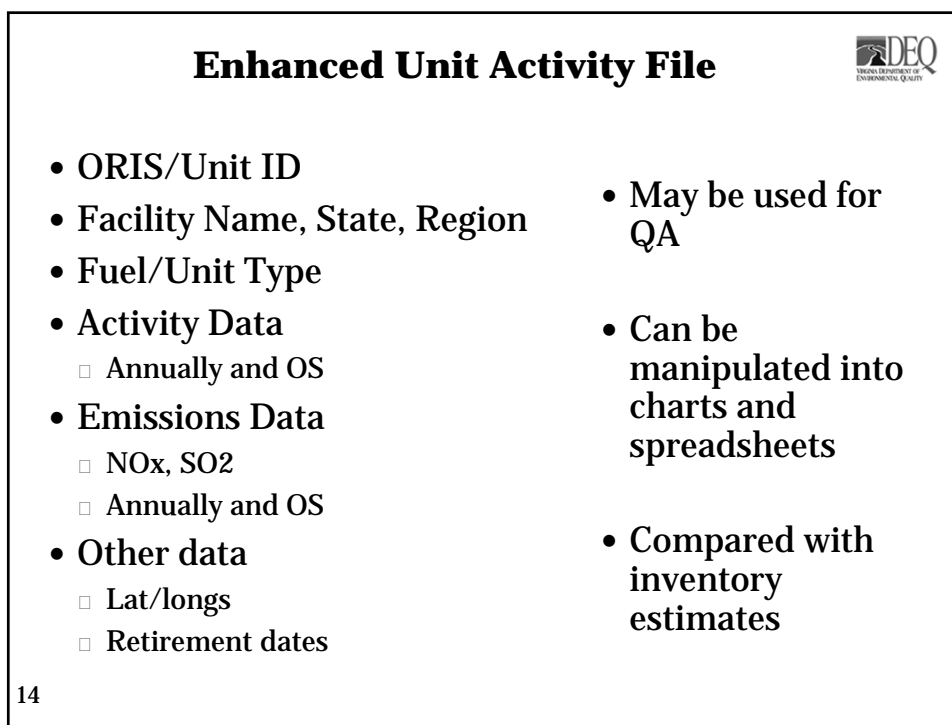
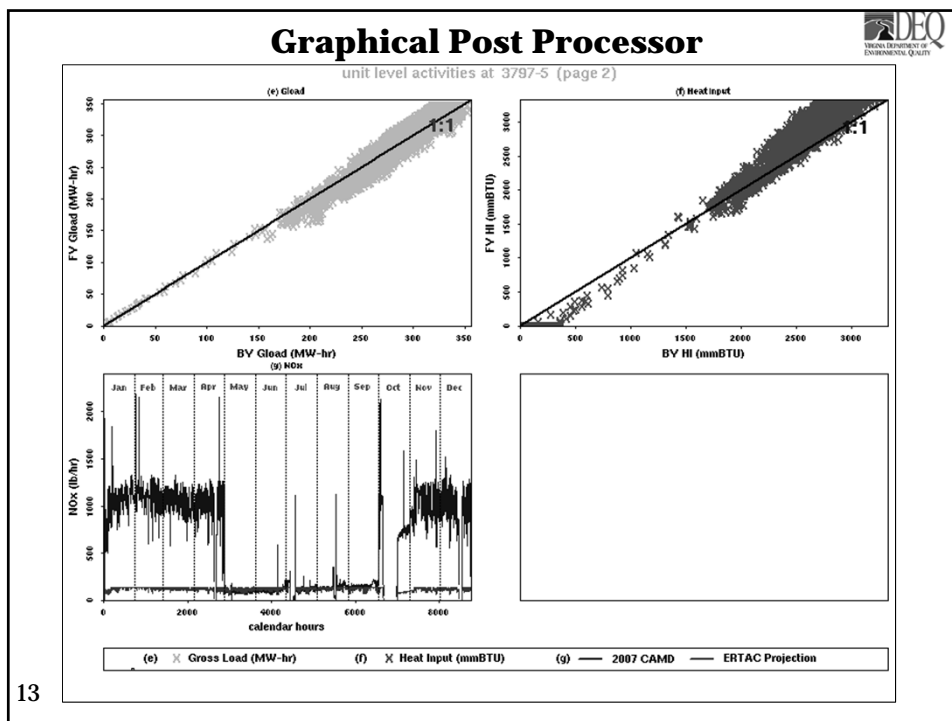


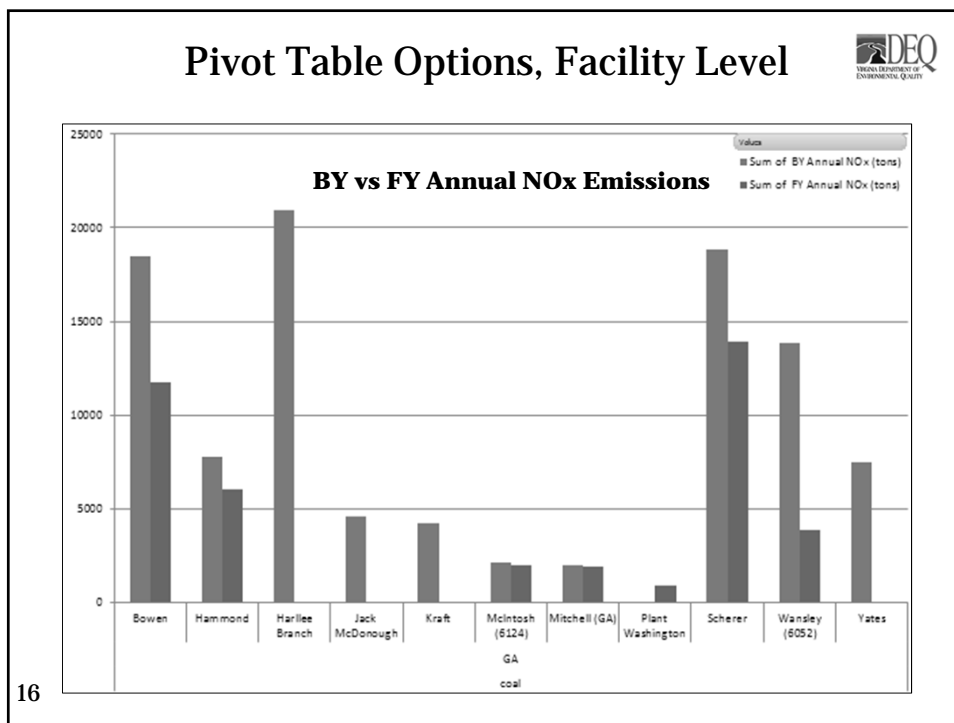
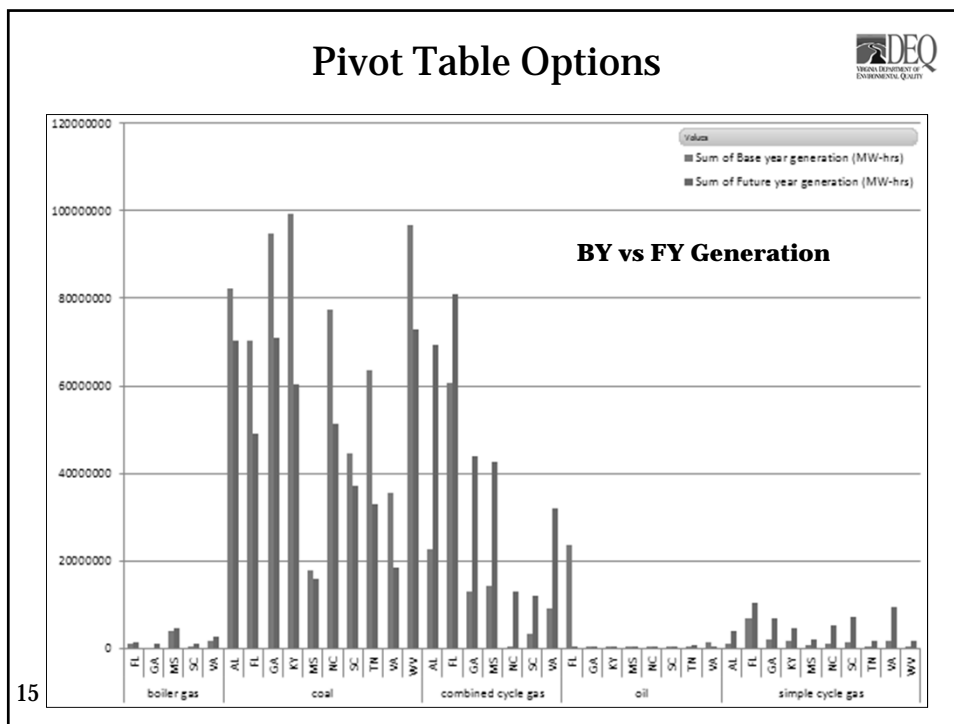
Graphical Post Processor

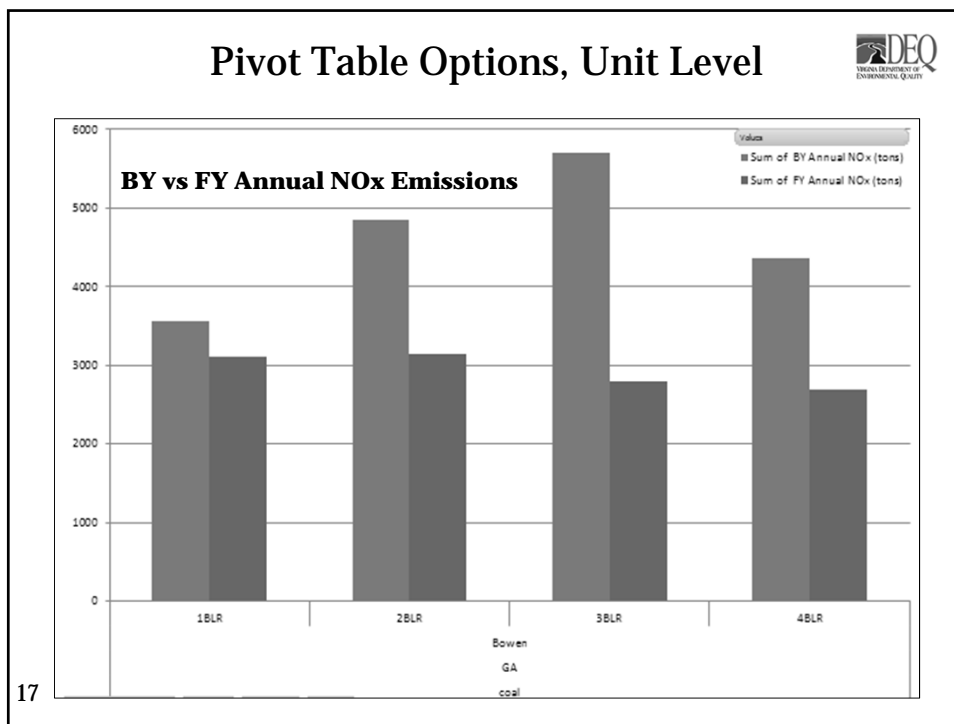


unit level activities at 3797-5 (page 1)









Questions? Comments? Thoughts?


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