RATE REGULATON

Presentation to the Georgian National Energy and Water Supply Regulatory Commission

Batumi, Georgia
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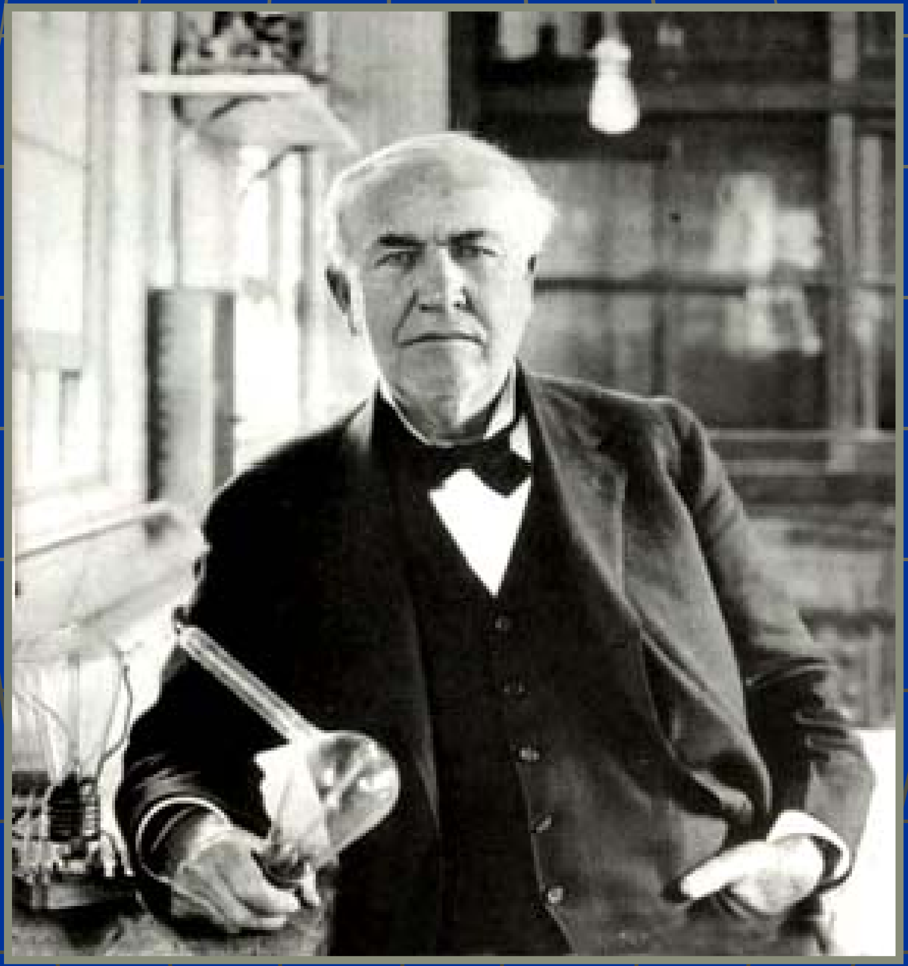
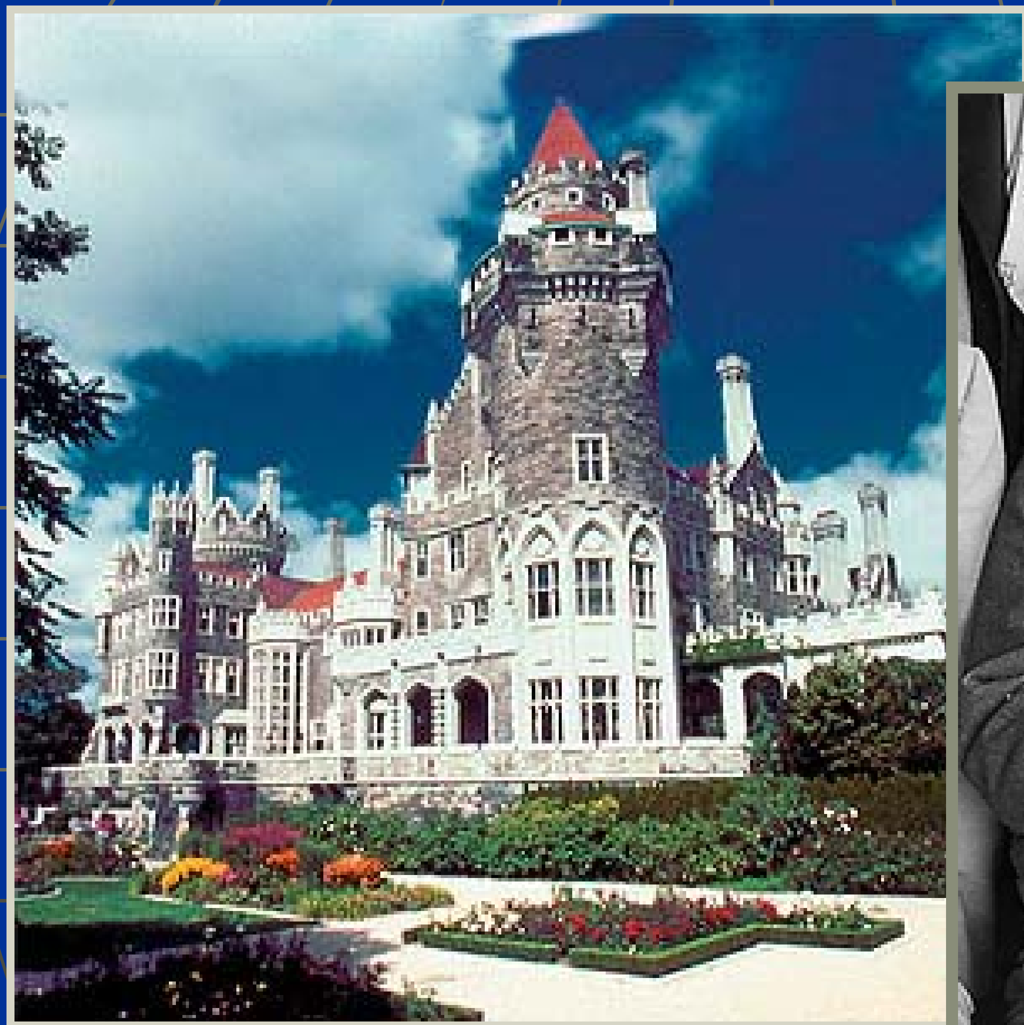
In the beginning……..



What Thomas Edison did do, however, was see the big picture. Edison was the first person to make both the bulb and the generator commercially viable, combine them, and demonstrate the enormous benefits of large-scale electrification. His was the genius that was able to put the puzzle pieces together to make the whole system work.

The Economist, 1999

PEARL STREET STATION



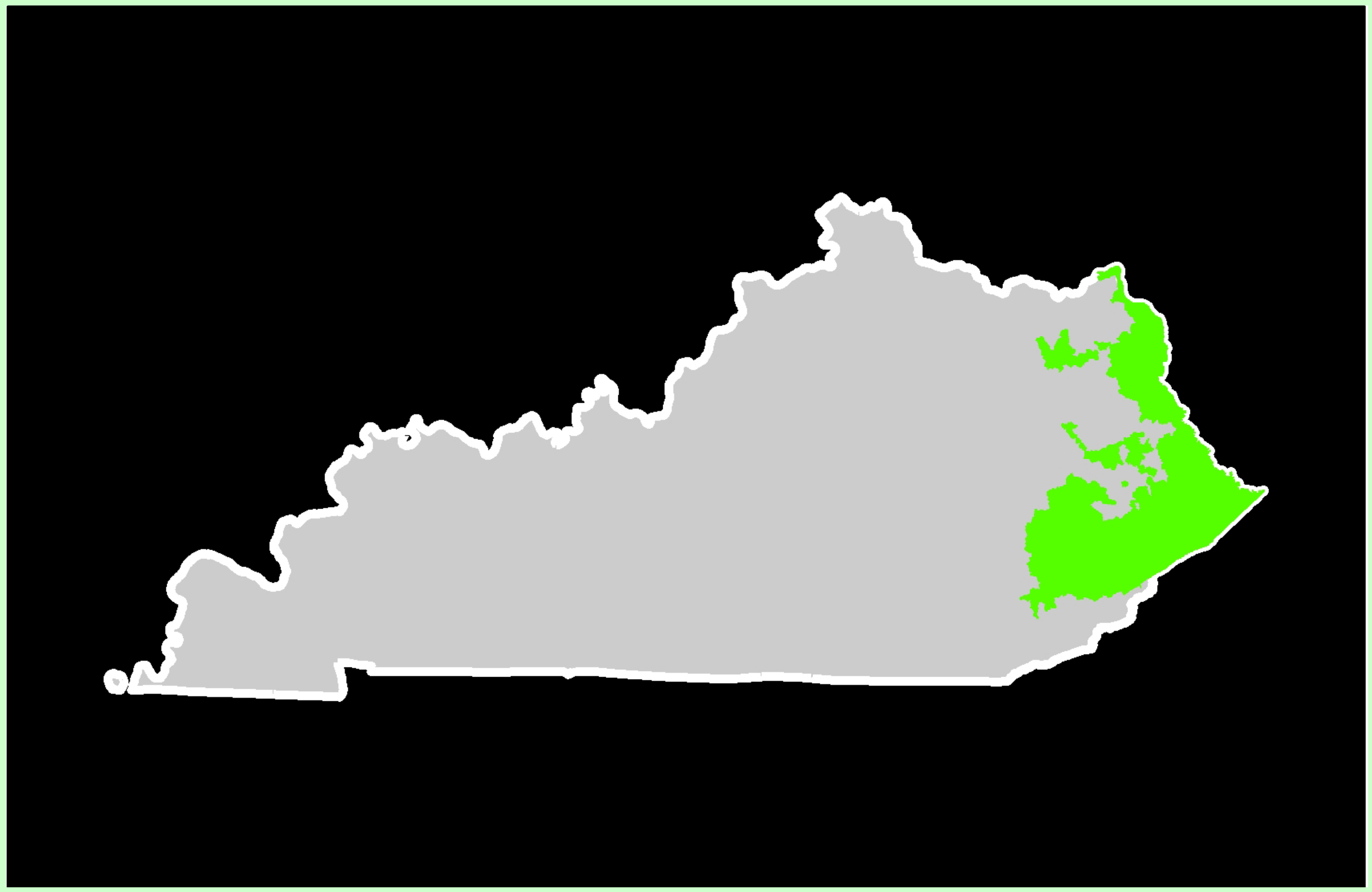
Casa Loma, Toronto

Major-General Sir Henry Mill Pellatt, C.V.O.

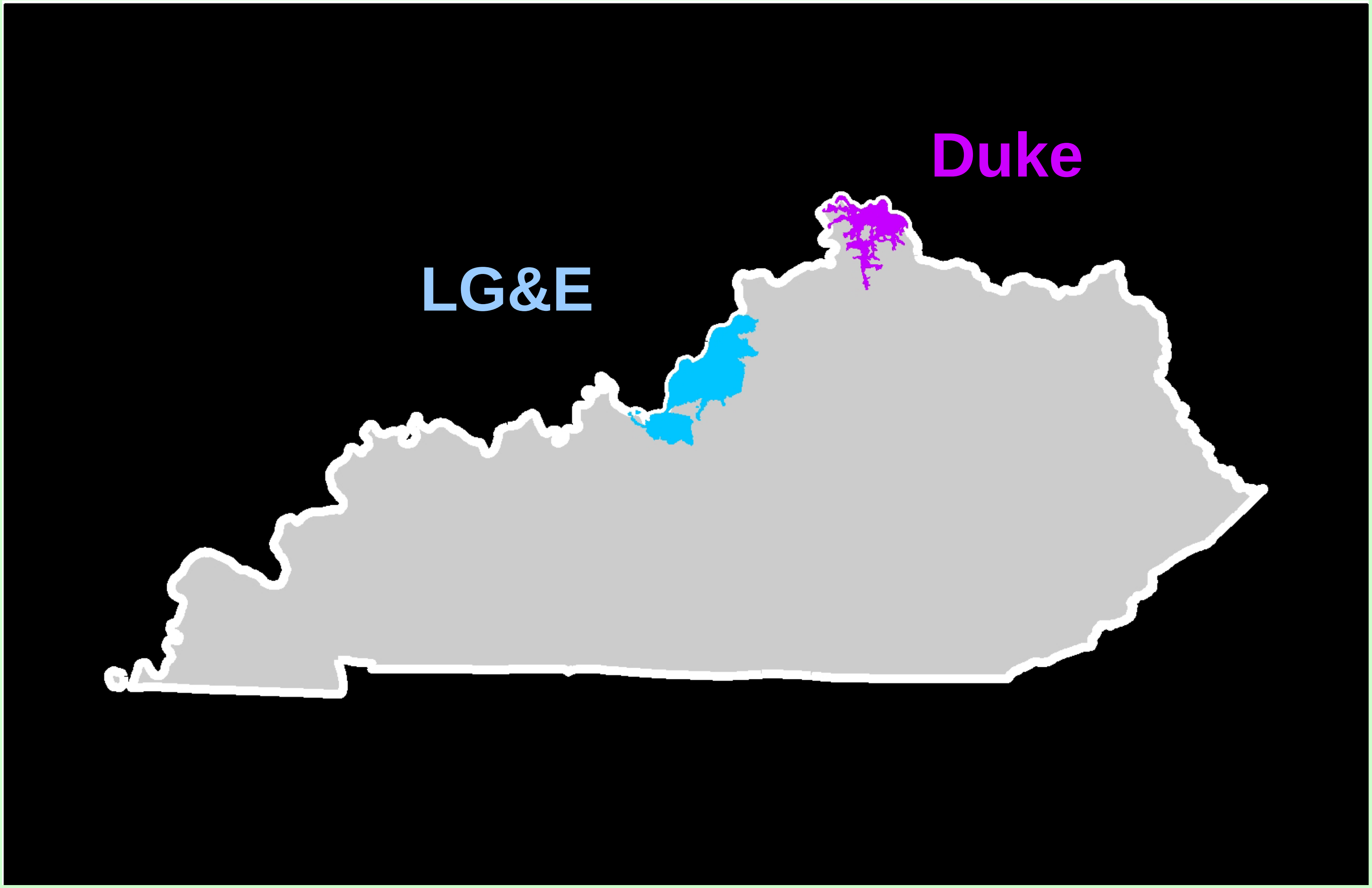
Regulating monopolies: the regulatory compact

Regulatory commissions were first established to oversee transportation monopolies

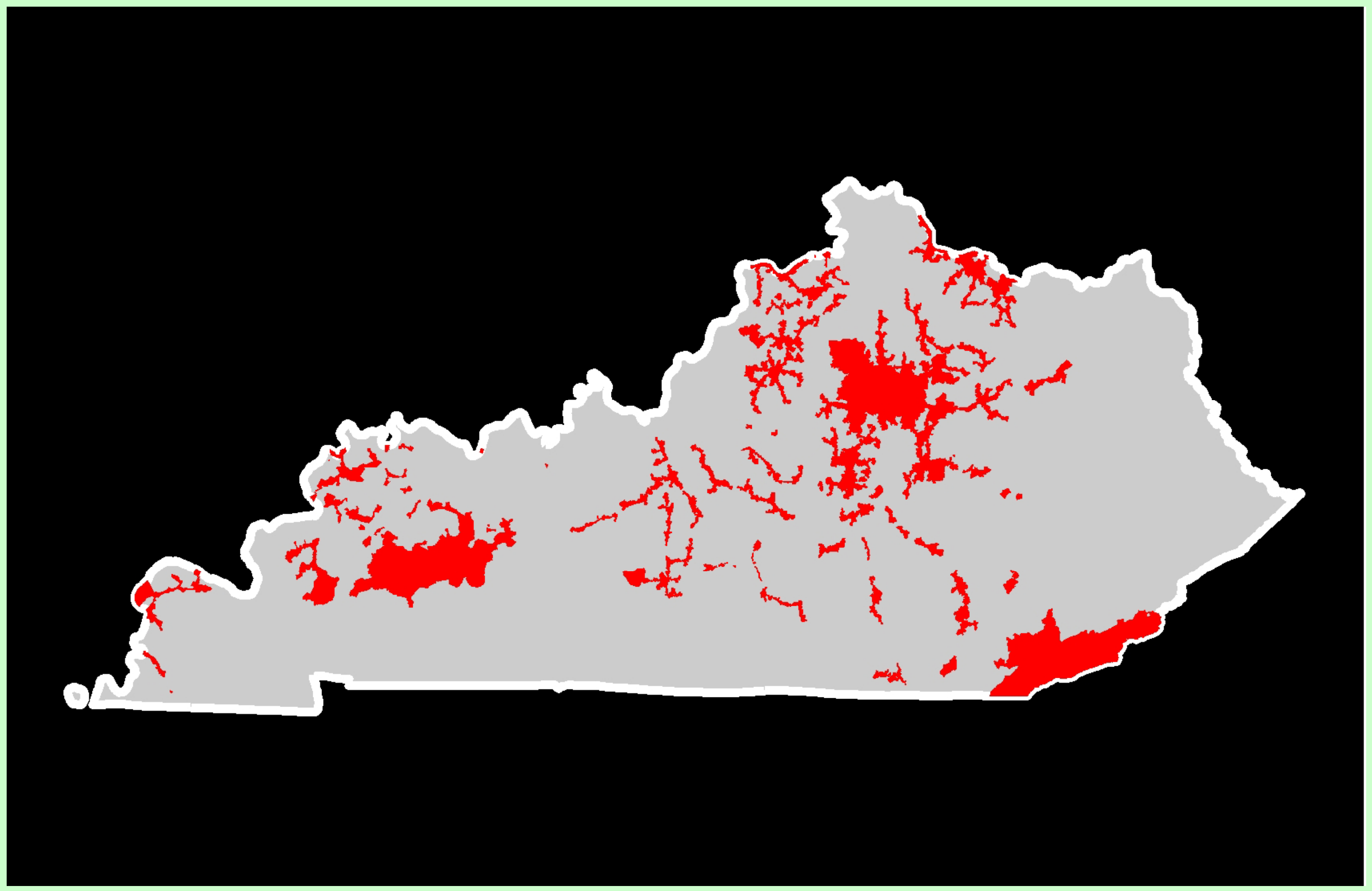
- Rhode Island – 1839
- Massachusetts – 1861
- 20 states before 1900
- Kentucky was a relative latecomer (1934)



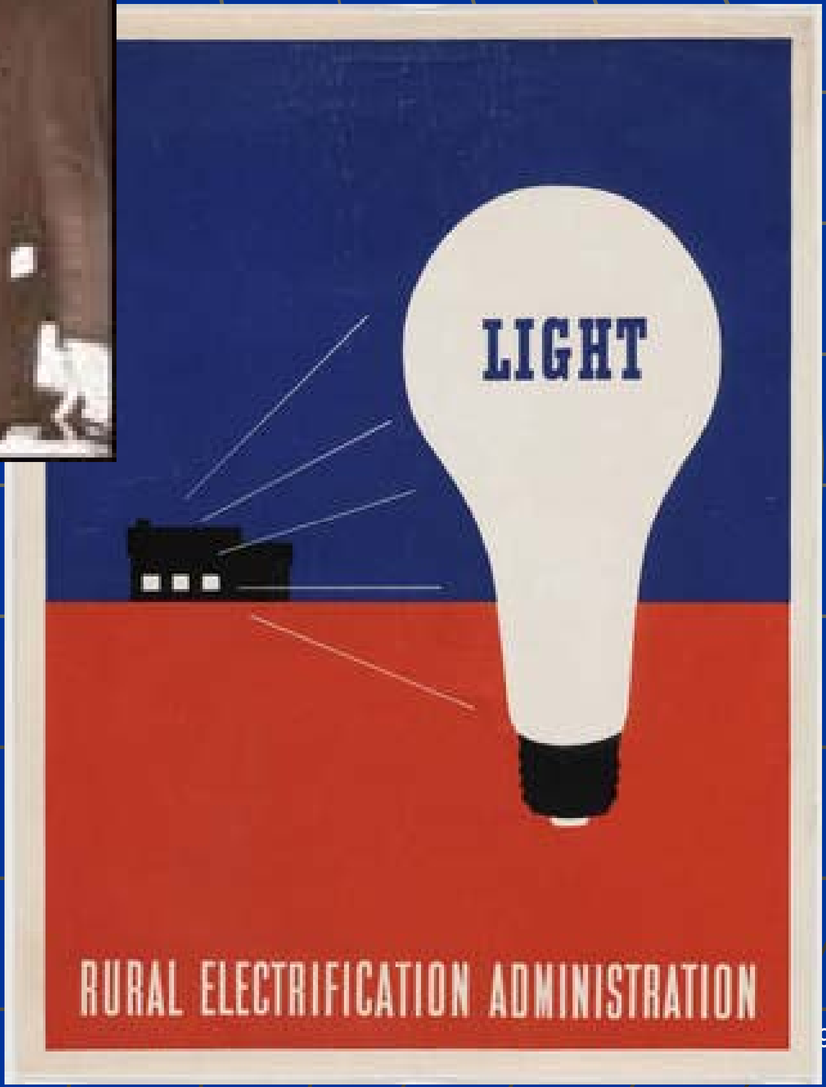
Kentucky Power Co. (AEP)

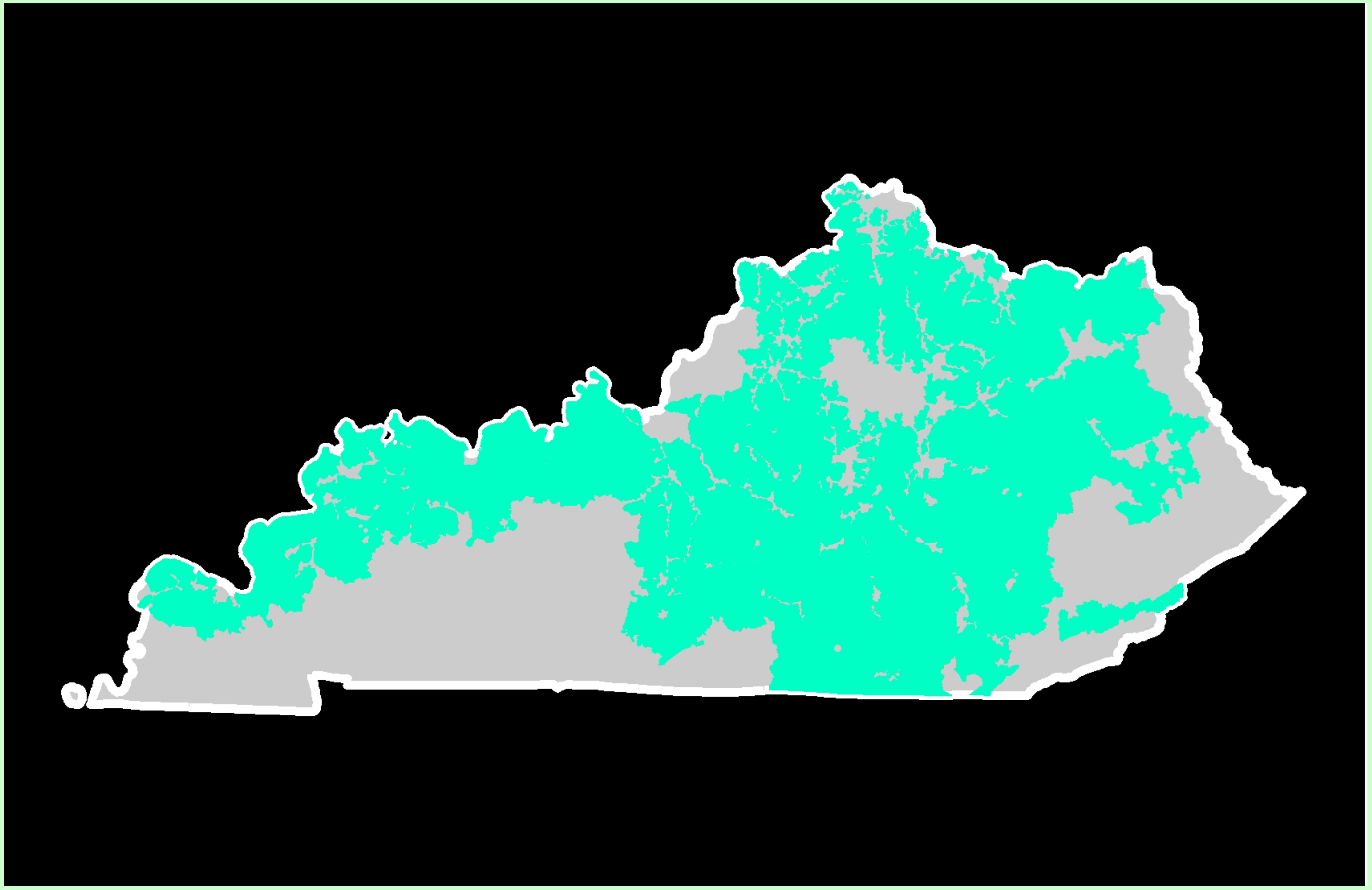


Louisville Gas & Electric Co. – Duke Energy Kentucky



Kentucky Utilities Co.


LIGHT
RURAL ELECTRIFICATION ADMINISTRATION



Jurisdictional rural electric cooperatives

Electric Distribution Service Areas

PSC Regulated Rural Electric Utilities

- Big Sandy RECC
- Blue Grass Energy Cooperative
- Clark Energy Cooperative
- Cumberland Valley Electric
- Farmers RECC
- Fleming-Mason Energy Cooperative
- Grayson RECC
- Inter-County Energy Cooperative
- Jackson Energy Cooperative
- Jackson Purchase Energy Corporation
- Kenergy Corporation
- Licking Valley RECC
- Meade County RECC
- Nolin RECC
- Owen Electric Cooperative
- Salt River Electric Cooperative
- Shelby Energy Cooperative
- South Kentucky RECC
- Taylor County RECC

PSC Regulated Investor Owned Utilities

- American Electric Power (AEP)
- Duke Energy Kentucky, Inc.
- Kentucky Utilities Company (KU)
- Louisville Gas and Electric Company (LG&E)

TVA Regulated Utilities

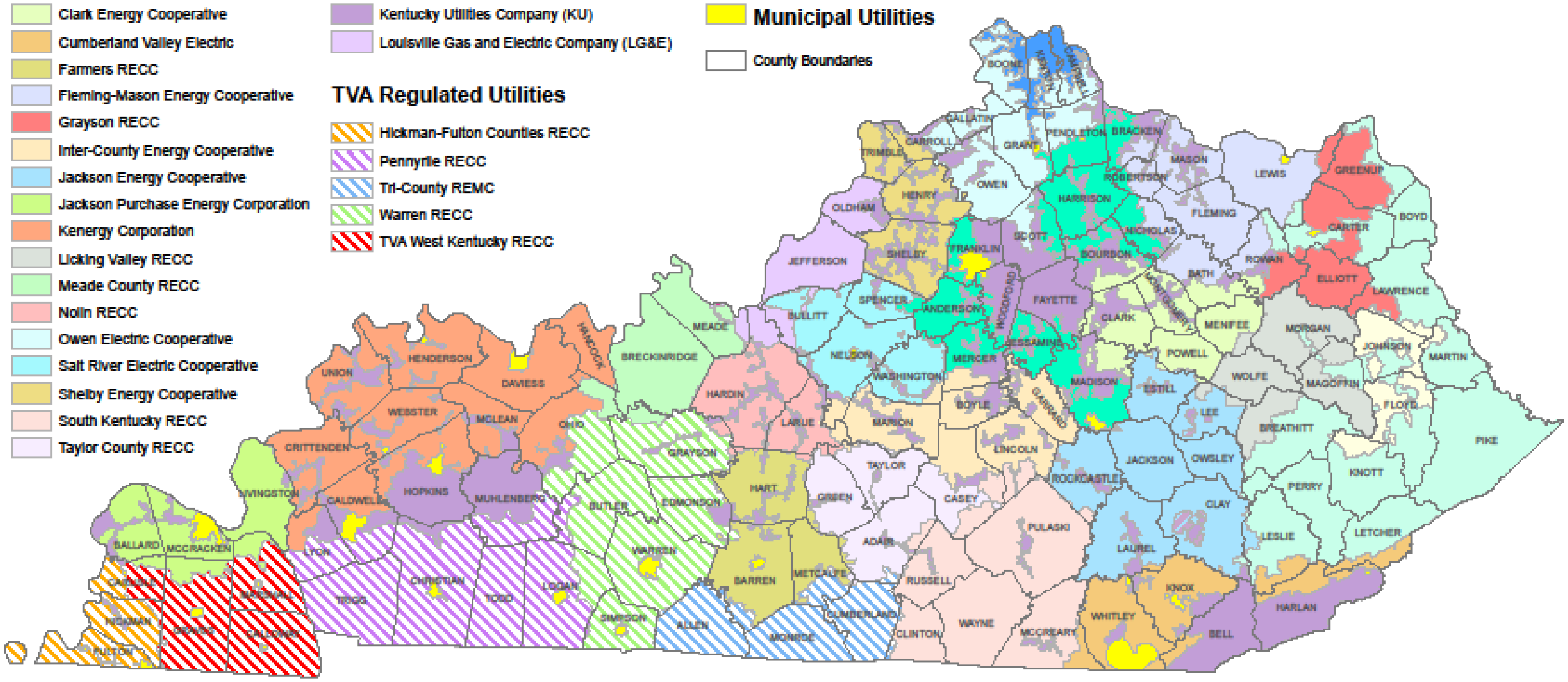
- Hickman-Fulton Counties RECC
- Pennyrile RECC
- Tri-County REMC
- Warren RECC
- TVA West Kentucky RECC

Multi-Service Areas

- Jackson Energy Cooperative & KU
- Meade County RECC & LG&E

Municipal Utilities

- County Boundaries



Kentucky has 30 municipal systems serving over 300,000 customers. Twelve of these are provided wholesale power by the Tennessee Valley Authority (TVA) and are regulated by them. The others are self-regulated by the municipality. The boundaries for the municipal systems were either derived from the Public Service Commission's certified territory maps, or from boundaries submitted for informational purposes to the PSC from the municipals. If the municipal service area boundaries were unknown, a circle was placed around the urbanized area.

The electric service areas are compiled from certified territory maps on file with the Public Service Commission. These are legal documents which define the retail service area of electric suppliers regulated by the Commission (Kentucky Statute 278.017). The legal certified territory boundaries are drafted on 1:24,000 USGS topographic maps, and can be assumed to have an accuracy of 100 feet. This map, which was compiled from the data, is for informational purposes only, and has no legal standing.

10 5 0 10 20 30 40 50 Miles

10 5 0 10 20 30 40 50 Kilometers

Kentucky Public Service Commission
July 14, 2009

The Kentucky Public Service Commission

- Created by the Kentucky General Assembly in 1934.
- Independent regulatory agency
- Quasi-judicial function
- PSC does not set energy policy or broad utility regulatory policies
- Operates in accordance with statutes, regulations and judicial precedent

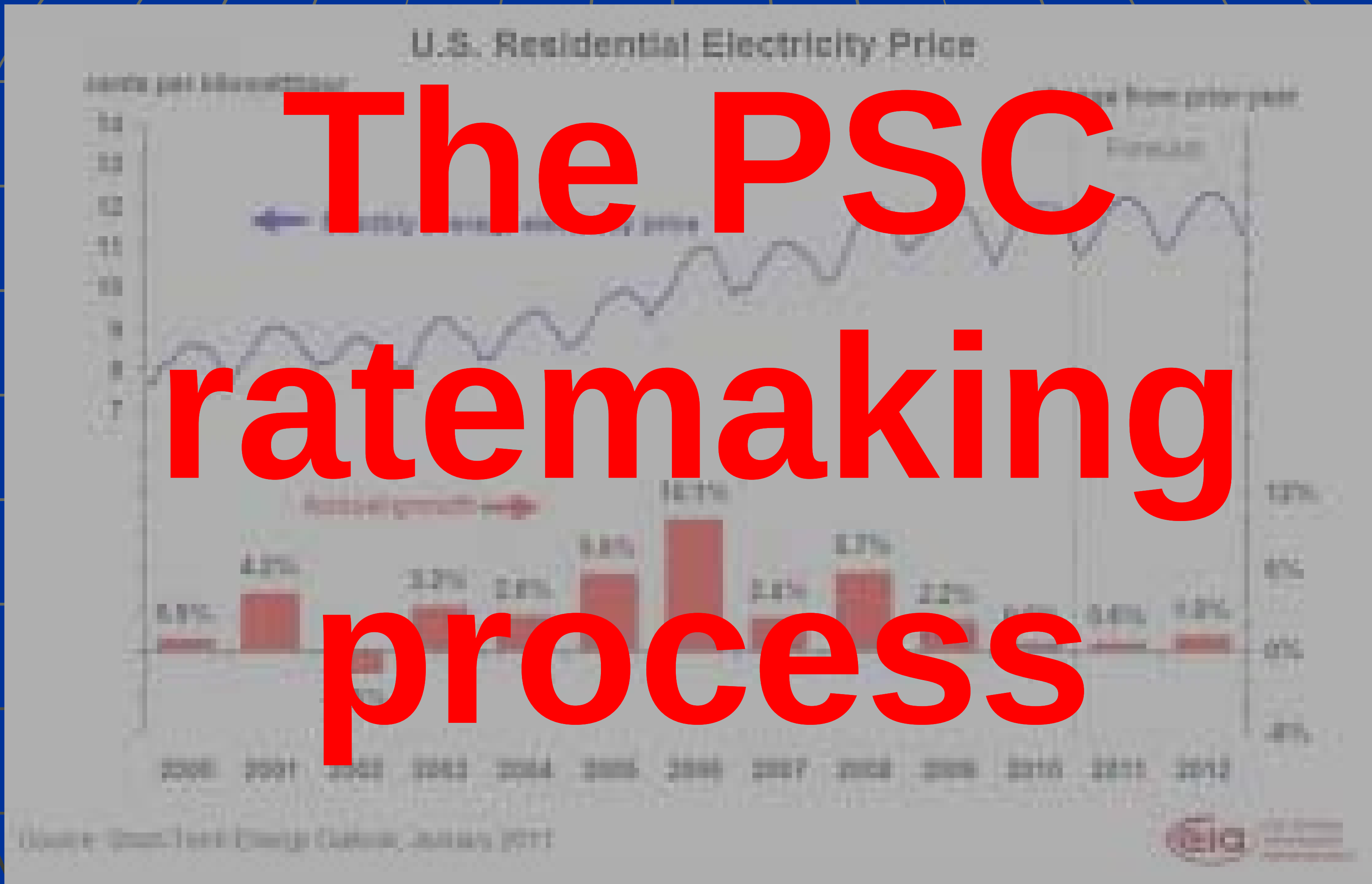
The Kentucky Public Service Commission

- Regulates rates and service of following intrastate utilities:
  - Natural gas distribution systems and intrastate transmission pipelines
  - Telecommunications
  - Electric
  - Sewer
  - Water
- About 1,550 regulated utilities

PSC Mission Statement

To ensure that utility rates are fair, just, and reasonable for the services provided and that those services are adequate, efficient, and reasonable.

The PSC ratemaking process



The PSC ratemaking process

Governed by statute - KRS 278

Rates must be "fair, just and reasonable" and allow for:

1) investors to earn a fair return on investment;

2) cooperatives to maintain acceptable equity to debt ratios; and

3) governments to meet debt service requirements imposed by lenders.

Two-part Process

- **Revenue Requirements**
- **Rate Design**

Revenue Requirements – Methods of Calculation Used in Kentucky

1) Return on Equity – Used by Large Investor Owned Utilities (IOU's).

2) Operating Ratio – Used by Small IOU's.

3) Times Interest Earned Ratio (TIER) – Used by Electric Cooperatives.

4) Debt Service Coverage Ratio – Used by Governmental Entities.

Revenue Requirement – Return on Equity

IOU's using this method: 1 Water, 4 Electric, 5 Gas

Rate Base or Total Capital	$X,XXX
Times: Weight Cost of Capital (Includes Average Cost of Debt and Cost of Equity)	XX%
Allowable Return/Net Operating Income	XXX
Plus: Operation and Maintenance Expenses (O&M)	X,XXX
Depreciation Expense	XXX
Income Taxes and Other Taxes	XXX
Total Revenue Requirement	X,XXX
Less: Other Operating Revenue	(XXX)
Revenue Required from Rates for Service	$X,XXX

Rate Base

Utility Plant in Service	$X,XXX
Less: Accumulated Depreciation	(XXX)
Net Plant	X,XXX
Add: Working Capital	XXX
Materials and Supplies Inventory	XX
Deferred Maintenance	XXX
Deferred Debits	XX
Less: Deferred Tax Liabilities	(XXX)
Customer Advances	(XX)
Contributions	(XXX)
Total Rate Base	$X,XXX

Weighted Cost of Capital

		Percent of Total	Cost Rate, %	Weighted Cost, %
Debt	$2,000.00	50.00%	5.00%	2.50%
Preferred Stock	500.00	12.50%	6.00%	0.75%
Common Equity	1,500.00	37.50%	11.00%	4.13%
	$4,000.00	100.00%		7.38%

Return/Cost of Common Equity

The Return on Common Equity is determined by the Commission using a combination of these methods/analysis:

Discounted Cash Flow (DCF),
Risk Premium Method
Capital Asset Pricing Model (CAPM)
Expected Earnings Approach

Proxy Groups are used in each method.

Revenue Requirement - Operating Ratio

IOU's using this method include: 4 Water, 38 Sewer, 11 Gas

Operating Expenses	
(O&M, Depreciation, Taxes Other Than Income)	$X,XXX
Divide by: 88 % Operating Ratio	88%
Sub-Total	X,XXX
Less: Total Operating Expense as shown Above	(X,XXX)
Allowable Margin Over Operating Expenses	XXX
Plus: Operating Expenses as shown Above	X,XXX
Income Taxes, when appropriate	XXX
Interest on Long-Term Debt	XXX
Total Revenue Requirement	X,XXX
Less: Other Operating Revenue	(XXX)
Revenue Required from Rates for Service	$X,XXX

Revenue Requirement – Times Interest Earned Ratio (TIER)

TIER = (Net Margins + Annual Interest Expense on Long-Term Debt) / Annual Interest Expense on Long-Term Debt

TIER is a measure of financial performance developed by the United States Department of Agriculture's Rural Utility Service, the main lender to Rural Electric Cooperatives.

Electric Cooperatives Using this Method:
2 Generation and Transmission Coops
19 Distribution Coops

The TIER level allowed by the Commission for Generation and Transmission Coops is determined on a case-by-case basis and is dependent upon the utility's financial position at the time of the Commission's Review.

The TIER allowed for Distribution Coops is usually set at 2.0 but can be higher or lower when warranted by the utility's financial condition.

A 2.0 TIER sets Net Margins at an amount equal to Annual Interest Expense on Long-term Debt.

Revenue Requirement – TIER

O&M Expenses	**$X,XXX**
Plus: Depreciation Expenses	**XXX**
Taxes Other Than Income Taxes	**XXX**
Interest on Long-Term Debt	**XXX**
Interest on Short-Term Debt	**XXX**
Non-Utility Expenses	**XXX**
Margin Required to Attain Allowable TIER	**XXX**
Total Revenue Requirement	**$X,XXX**
Less: Other Operating Revenue	**(XXX)**
Non-Utility Revenues, including Interest Income	**(XX)**
Patronage Capital Credits from Lenders	**(XX)**
Revenue Required from Rates for Service	**$X,XXX**

Revenue Requirement – Debt Service Coverage Ratio

Number of Utilities Using this Method:
109 County Water Districts and Associations and
103 Municipal Water Systems that provide regulated wholesale service.

O&M Expenses	$X,XXX
Taxes Other Than Income Taxes	XXX
Depreciation	XXX
Total Expenses	X,XXX
Plus: 3 or 5 year Average Principal and Interest Payments on LTD	XXX
Debt Coverage Requirement, established by Lender	XX
Total Revenue Requirement	X,XXX
Less: Other Operating Revenue	(XX)
Non Utility Revenues, Including Interest Income	(XX)
Revenue Required from Rates for Service	$X,XXX

Revenue Requirement

- The financial information used to calculate a revenue requirement using any of the methods is based on a Test Year.

- A Test Year may be a historic period or a forecasted period.

- The filing requirements for a Historic Test Year are different than those for a Forecasted Test Year.

Revenue Requirement – Historic Test Year

- Can be any 12 consecutive month period.
- Adjustments can be made to the historic financial information for changes that are known and measurable.

Revenue Requirement – Forecasted Test Year

- A forecasted test year is designed to recover the specific costs the utility expects to incur during the first 12 month period that the proposed rates are to be in effect.
- Not used by many utilities due to complexity of the filing requirements.

Revenue Requirements – Forecasted Test Year

Number of Utilities Filing Rate Cases Using Forecasted Test Year

Water	1 out of 148
Electric	2 out of 25
Gas	2 out of 27
Sewer	0 out of 67

Revenue Requirements – Allowable Expenses

- All reasonable and prudent expenses necessary for the delivery of utility services are recoverable no matter which type of Test Year is used.
- Types of Expenses not allowed:
  - Contributions to Charitable Organization, Social Clubs, and Community Welfare Programs.
  - Executive Bonuses when based on utility meeting financial targets.
  - Promotional Advertising.

Revenue Requirements – Regulatory Assets/Liabilities

Non-Recurring Revenues and Expenses:

- Immaterial items are removed from the test year operations.
- Material items are removed from the test year income statement; reported as regulatory liability or asset on the balance sheet; and amortized over a period of time established by the Commission.

Regulatory Asset/Liability Accounting is permissible for American Companies pursuant to Accounting Standard Codification 980-340-25-1 (Formerly Statement of Financial Accounting Standards No. 71).

Revenue Requirements – Regulatory Assets/Liabilities

Currently there is no provision for Regulatory Asset/Liability Accounting pursuant to the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The American Security and Exchange Commission is currently considering whether to mandate the use of IFRS instead of the current American Generally Accepted Accounting Principals (GAAP) developed by the Financial Accounting Standards Board (FASB). FASB and IASB are currently working together to determine what, if any, revisions to the IFRS are required before applying its standards to American companies. The lack of a provision by IFRS for regulatory asset/liability accounting has been identified as a major problem. It is anticipated that IFRS will be amended to include a provision for accounting for regulatory assets/liabilities.

Rate Design – General Practices

After the revenue requirement is determined, rates are designed using a cost-of-service study.

The Commission's general objective with regard to rate design is to establish rates to be charged to each class of customer (i.e. residential, commercial, industrial, etc.) that will produce revenues equal to the utilities cost to serve each class of customer.

Generally, this objective has been met in the water industry but not in the electric industry. In the electric industry subsidies exists between customer classes as well as within customer classes. The Commission is gradually reducing these subsidies over time.

Documentation Reviewed During Review of Rate Application

- Filing requirements checklist found on PSC web-site. http://psc.ky.gov/Home/utilForms

- In cases involving "small" utilities (less than $5 million in annual revenues) additional information is commonly gathered through informal discovery during a field visit at the offices of the utility.

- Cases involving larger utilities, additional information is gathered through formal discovery in the form of written data requests.

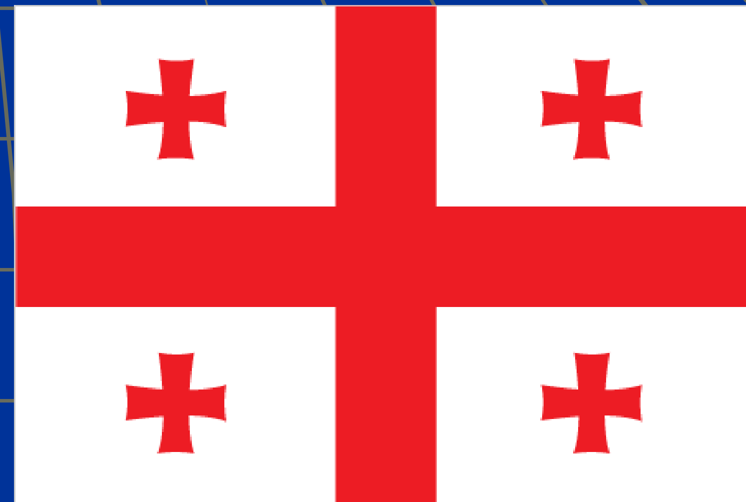
Types of Information Gathered and Reviewed during Discovery

- 5 or 10 year comparative Balance Sheet and Income Statement by Detailed Accounts
- Annual Reports on File with the Commission
- Audit Reports and Work papers prepared by Independent CPAs
- Billing Records Supporting the Billing Determinants included in the Application
- Minutes from Board meetings
- General Ledger and Subsidiary Ledgers
- Check Registers
- Plant Records
- Vendor Invoices
- Income Tax Returns
- Construction Work Orders
- Budgets and Budget Variance Reports
- Allocation
- Schedule of Aged Accounts Receivables
- Insurance Policies
- Actuarial Studies
- Debt Agreements and Debt Amortization Schedules
- Search for Related Party Transactions

Timing of Rate Cases

When a historic test year is used, the Commission has 6 months to issue an order after all information on the filing requirements checklist has been satisfactorily submitted. If no order is issued within 6 months, the utility may place the proposed rates into effect, subject to refund, until the Commission does issue a final order. The requirement is 7 months when a forecasted test-year is used. If the Commission has not issued a final order after 10 months from the original file date, the utility may place the rates into full effect.

QUESTIONS?



Didi madloba

THANK YOU