

Refining Industry Outlook

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Houston – September 27, 2001

Topics

- Overview of API & Major Activities
- Refining Industry Background
- Petroleum Product Demand
- Refinery Capacity Expansion Constraints
- Current and Future Refinery Construction Activity

Overview of API & Major Activities

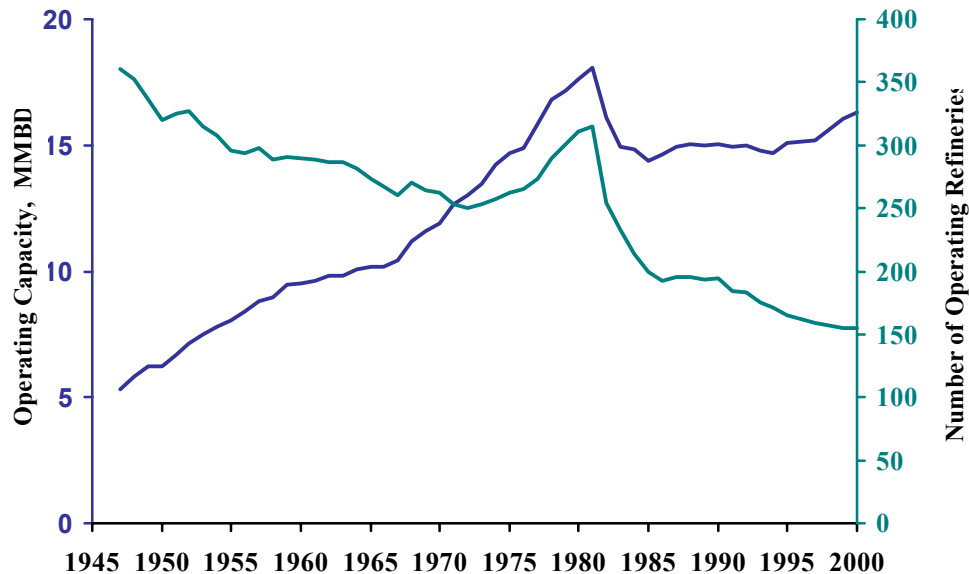
- API is a national trade association with over 400 members
- Primary focus is advocacy for industry segments
- Support services to support advocacy efforts
- Strong self-supporting programs to support industry
- API locations and staffing

Refining Industry Background

- Industry has changed
- Mergers and Acquisitions
- Growth of independents
- “Size Matters”

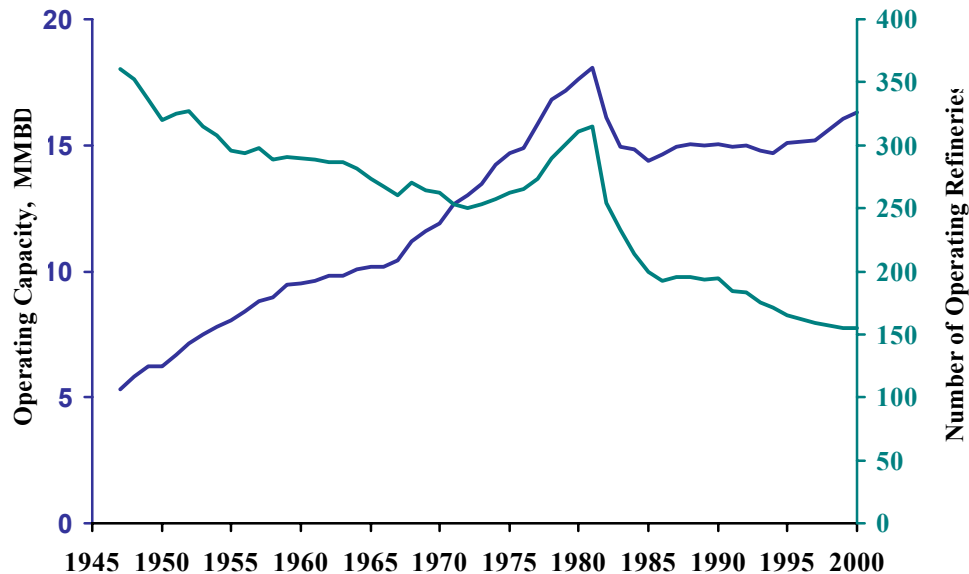
Capacity and Number of U. S. Refineries

Refinery capacity is up
8.2% (1990-2000) or
0.8% per year



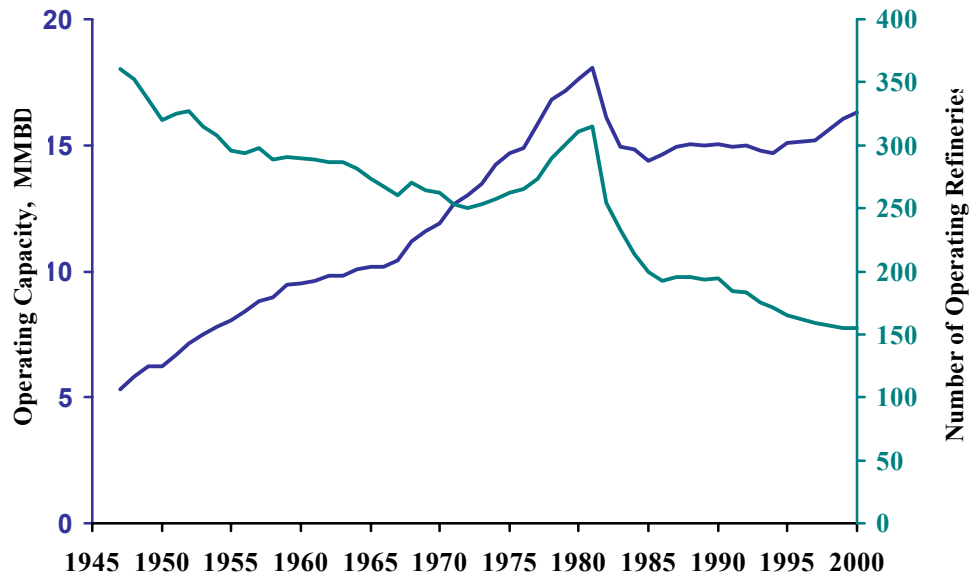
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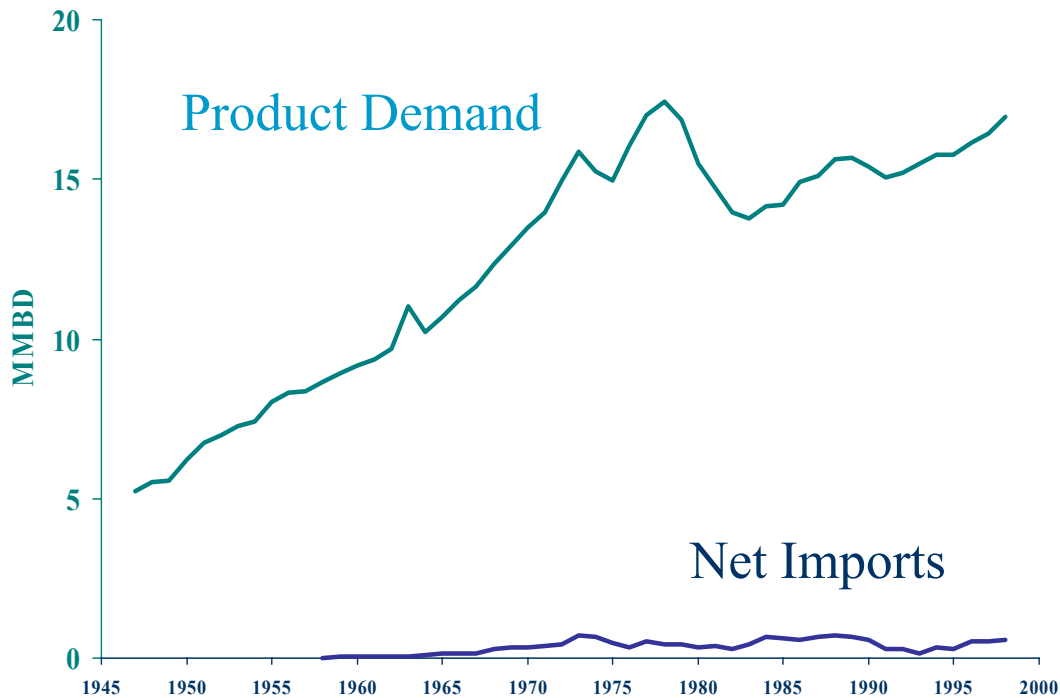


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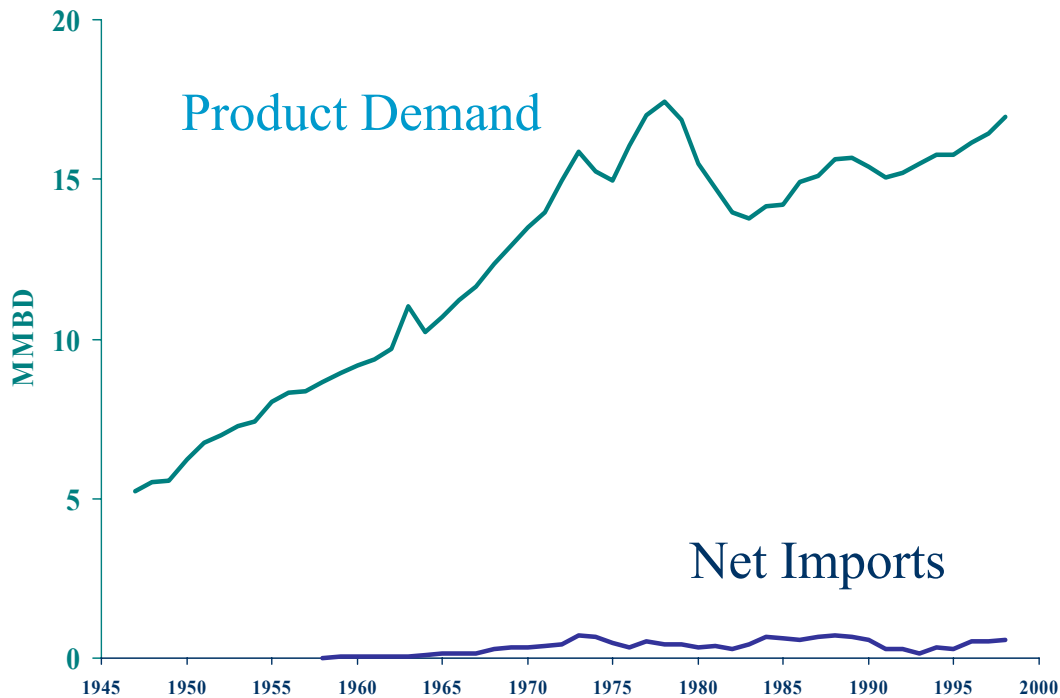


U. S. Petroleum Product Demand and Light Product Net Imports



Domestic deliveries up by 16% over the 1990 - 2000 period or 1.5% per year

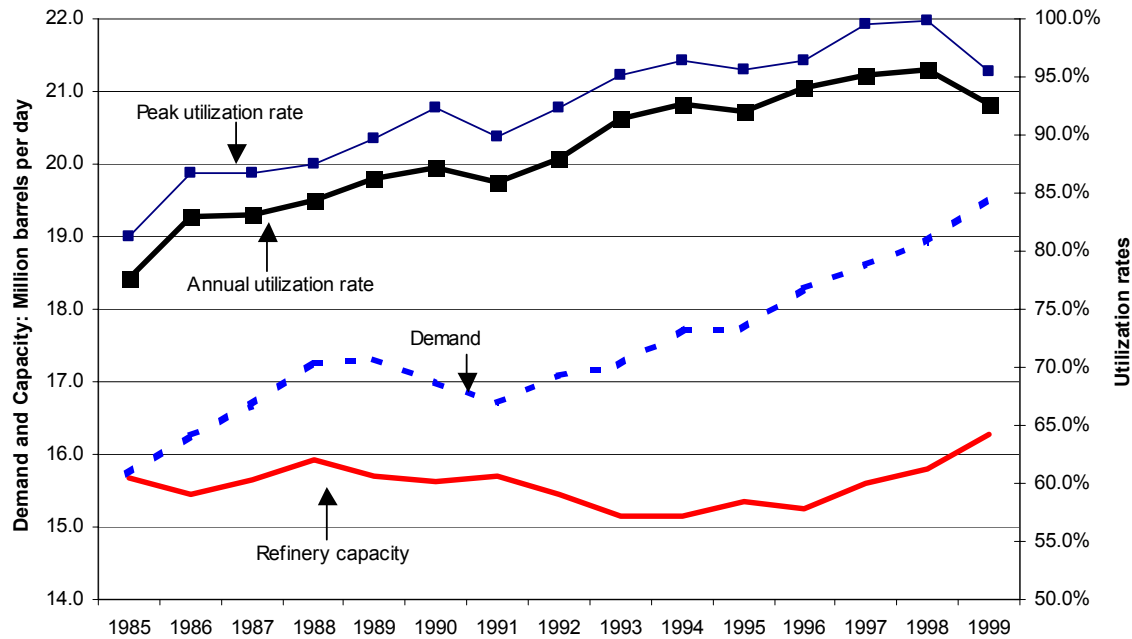
U. S. Petroleum Product Demand and Light Product Net Imports



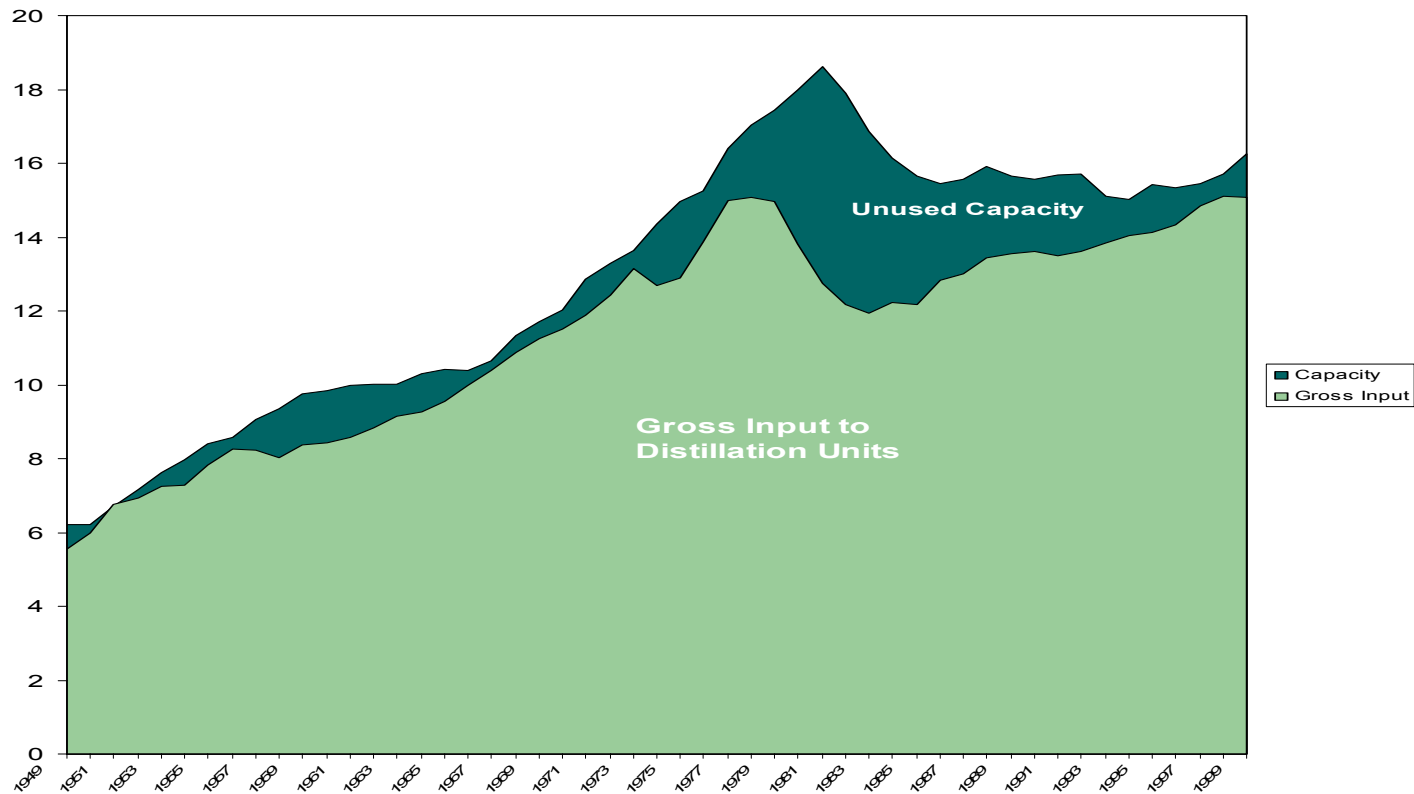
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Refinery Balances

U.S. Petroleum Demand, Refinery Capacity and Utilization Rate



Excess Refinery Capacity



Refinery Capacity Expansion Constraints

- Permitting and Regulatory Uncertainty
- Outdated Depreciation Treatment of Refineries
- Near Term Requirements for Large Environmental Investments

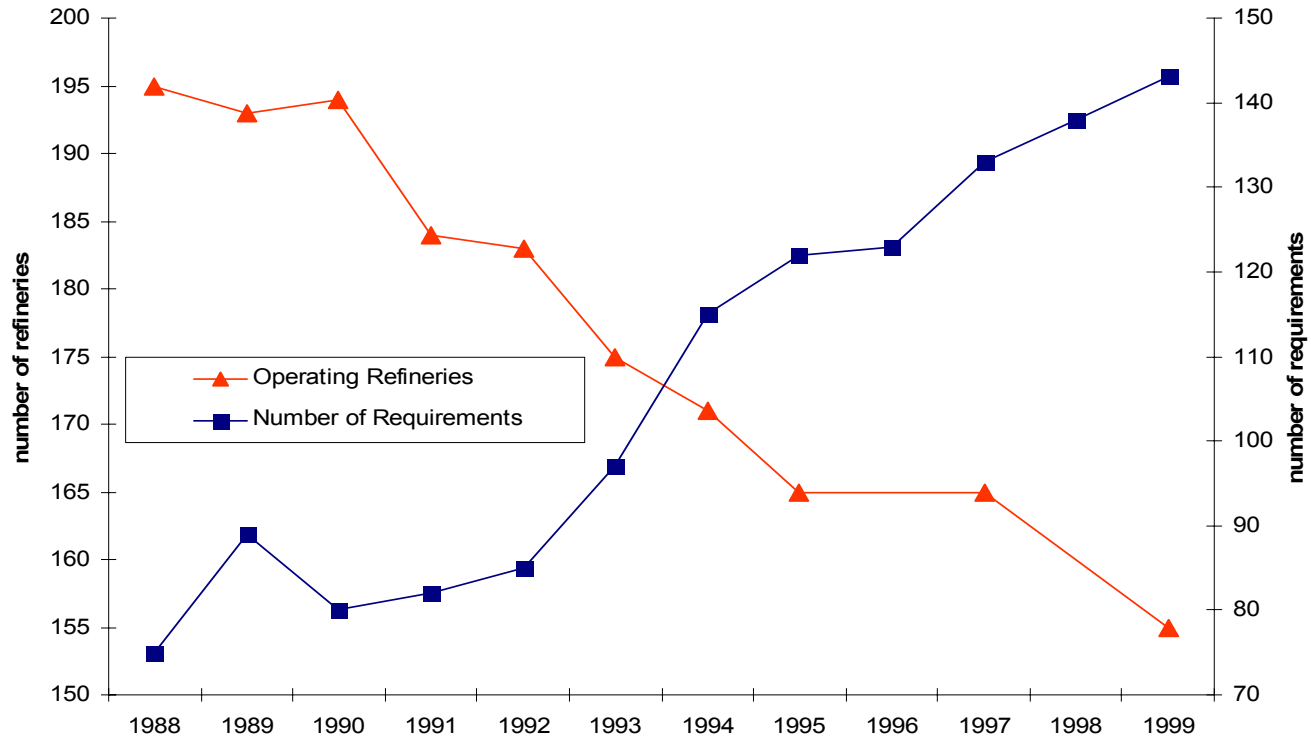
Permitting and Regulatory Uncertainty

- Permits required to construct new equipment or modify existing equipment
- Complex and time consuming process involving federal, state and local authorities
- Due to changing interpretations and guidance, great deal of regulatory uncertainty related to scope, timing, requirements and interpretations

Outdated Depreciation Treatment of Refineries

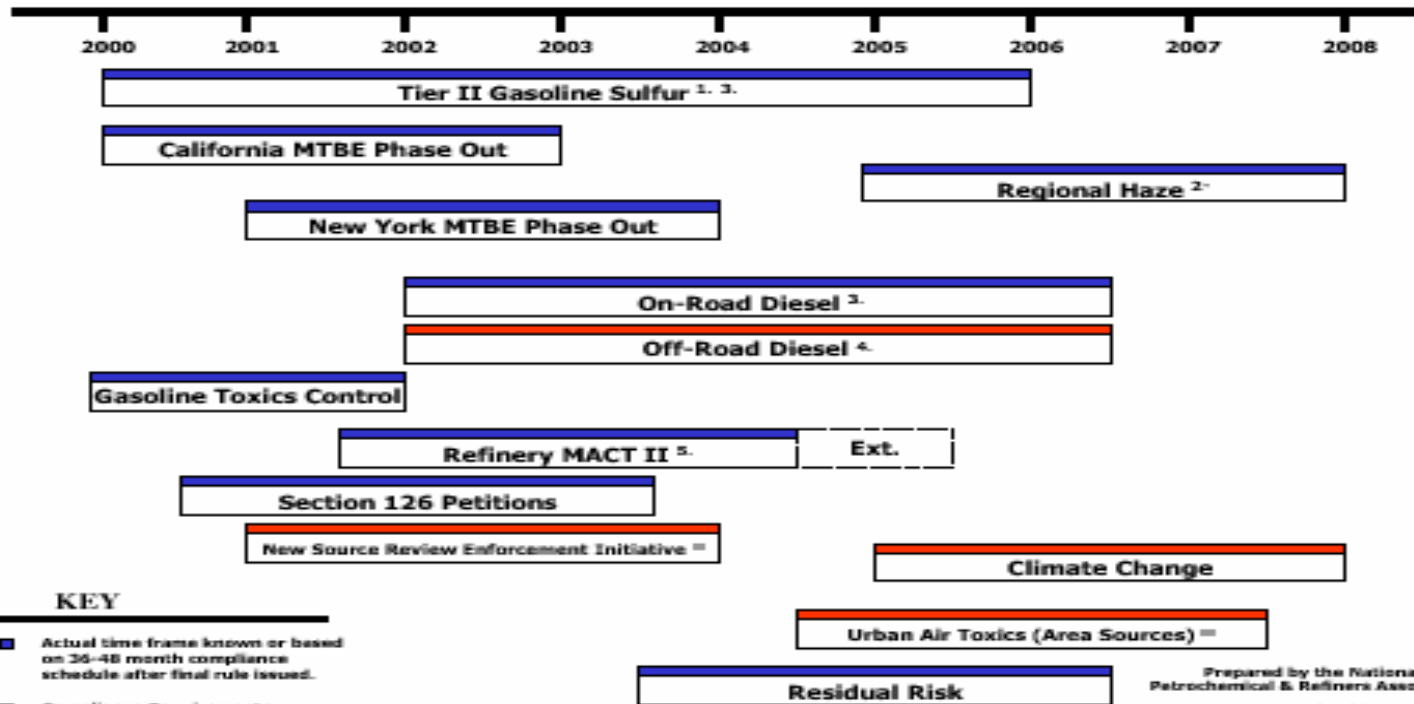
- Most manufacturing assets subject to 5 to 7-year depreciation
- Refineries still subject to 10-year depreciation schedule
- Result is longer recovery period and less incentive to invest in new projects

Number of Refineries Decreasing – Environmental Requirements Increasing



Regulatory Avalanche

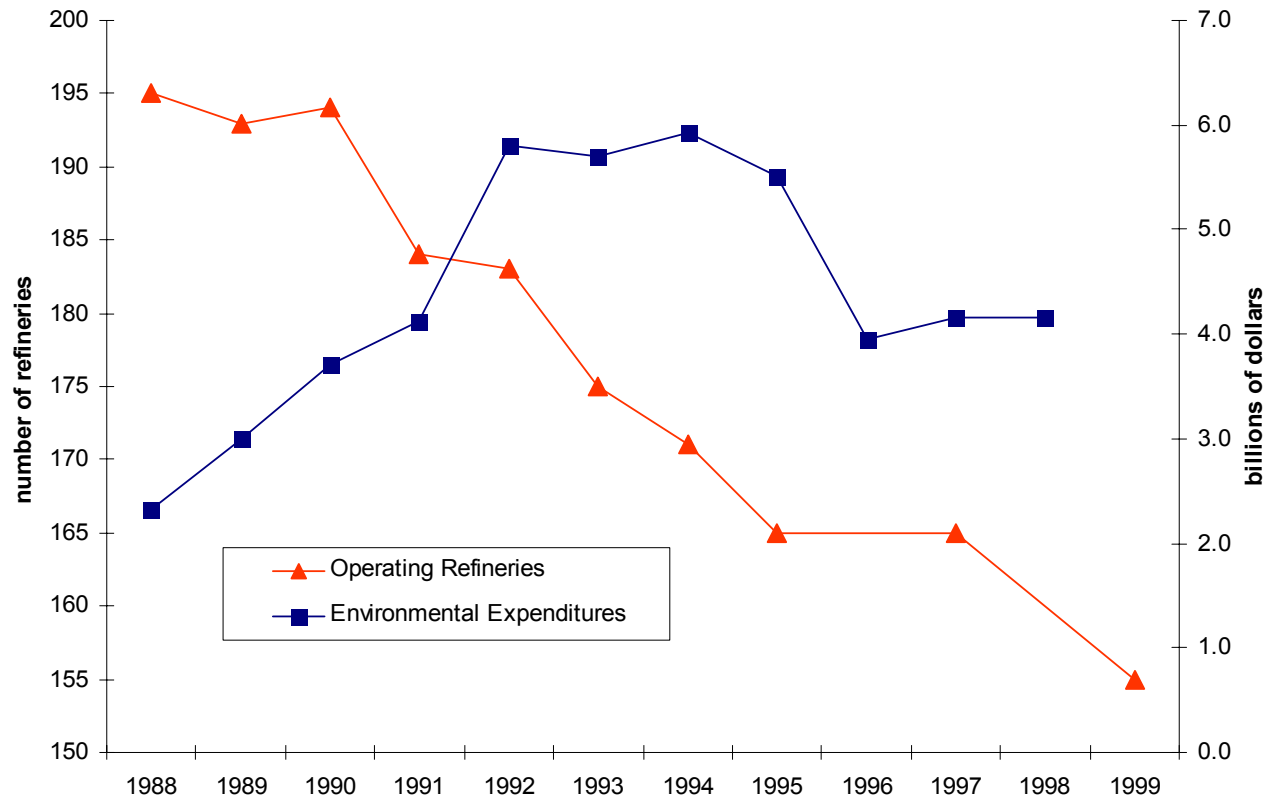
Cumulative Regulatory Impacts on Refineries, 2000 - 2008



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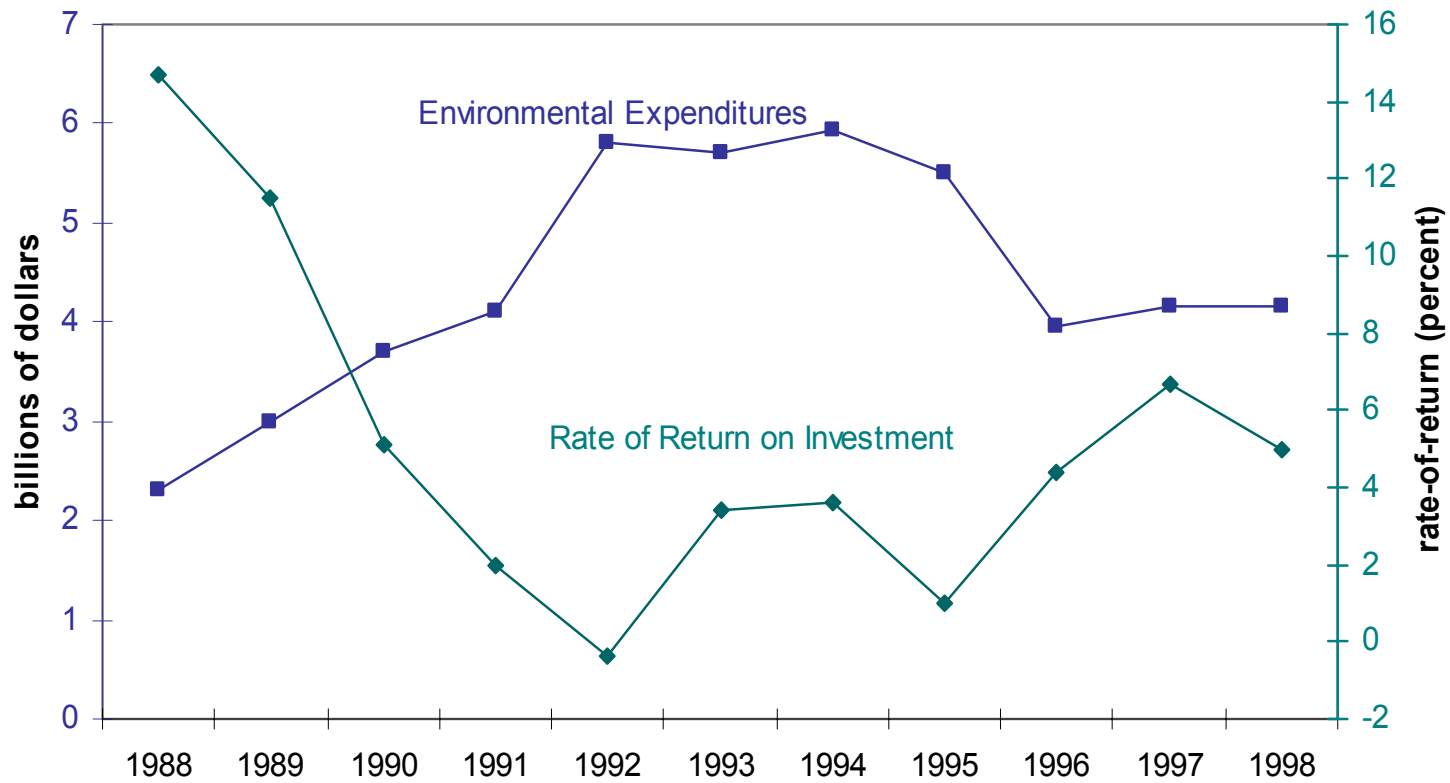
- Actual time frame known or based on 36-48 month compliance schedule after final rule issued.
- Compliance Requirements unknown and time frame estimated.

Number of Refineries Decreasing -- Environmental Expenditures Increasing



Inverse Relationship: Environmental Expenditures and Rate of Return on Refinery Investment

Sources: Performance Profiles of MEP and EIA/DOE



Near Term Requirements for Large Environmental Investments

- Reducing sulfur content in gasoline to 30 ppm → \$8 billion
- Reducing sulfur content in on-highway diesel fuel to 15 ppm → \$8 billion
- Eliminating MTBE from gasoline → \$1.8 to \$10 billion

Current and Future Refinery Construction Activity

- Large investments required at essentially all domestic refineries to produce cleaner fuels
- EIA Petroleum Product Supply Forecast between now and 2020 predicts 25% increase in demand
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Conclusions

- Industry significantly challenged to meet demand given substantial fuel specification changes and other regulatory initiatives
- Refiners will continue to provide products to meet consumer demand
- Construction needed to produce cleaner fuels and expand capacity
- Available investment capital impacted by environmental expenditures and low rates of return