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A REGIONAL COMPARISON OF NUCLEAR AND FOSSIL ELECTRIC POWER GENERATION COSTS*

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H. I. BOWERS

Engineering Technology Division

Oak Ridge National Laboratory

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In a recent study at Oak Ridge National Laboratory, new base load nuclear power plants were projected to be competitive with coal-fired plants in most regions of the country —

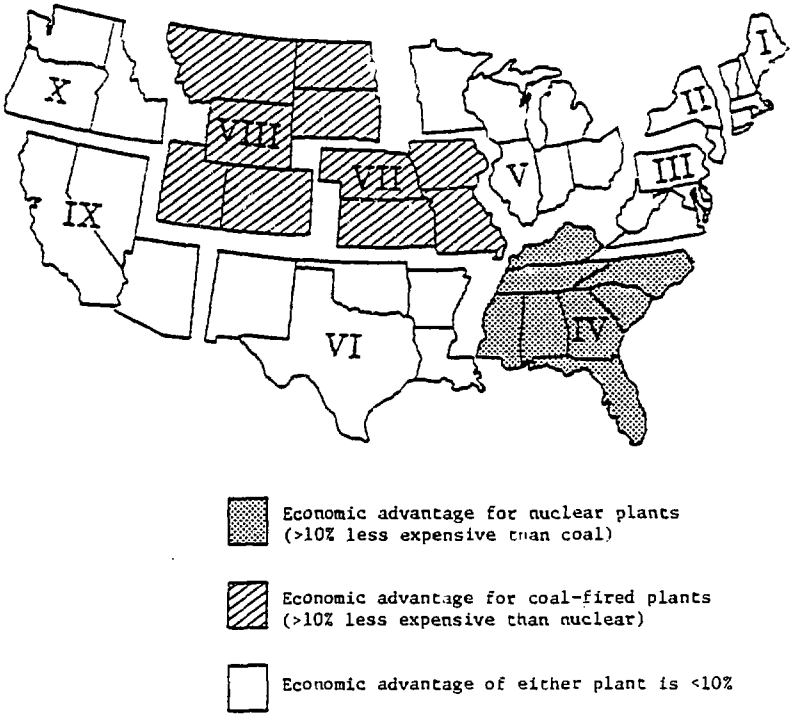
- Nuclear power costs were projected to be significantly less (10% or more) than coal-fired power costs in the South Atlantic region.

- Coal-fired plants were projected to have a significant economic advantage over nuclear plants in the Central and North Central regions.

- In the remaining seven regions, the levelized cost of power from either option was projected to be within 10%.

- Uncertainties in future costs of materials, services, and financing affect the relative economics of the nuclear and coal options significantly.

The comparison indicated that nuclear and coal are competitive in most regions of the country.



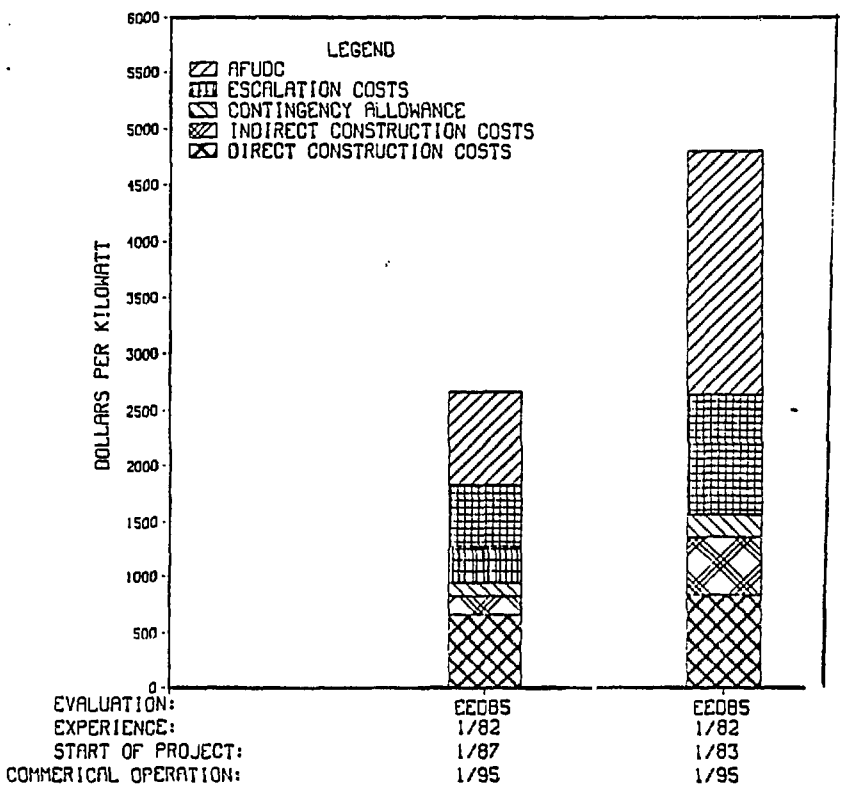
Nuclear's main disadvantages are its high capital investment cost and uncertainty in schedule compared with alternatives —

- Nuclear plant costs continue to rise whereas coal plant investment costs are staying relative steady

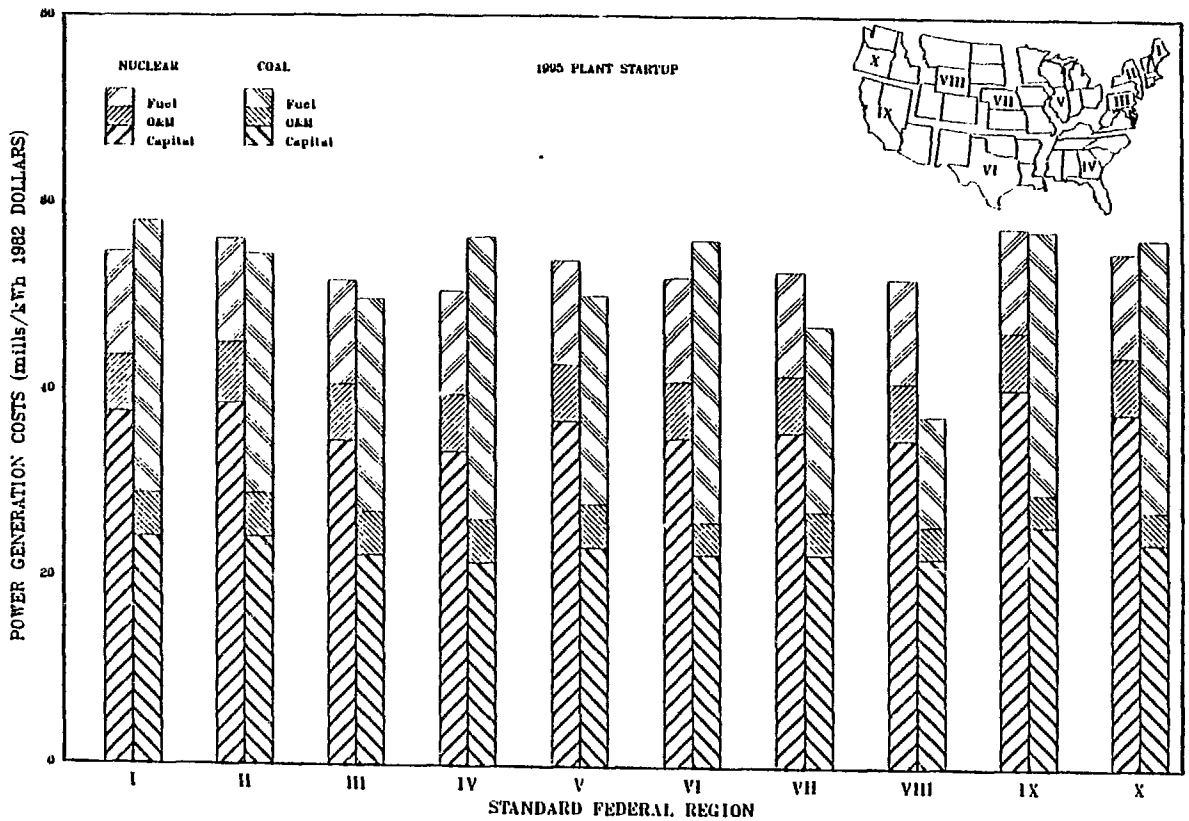
- Based on average experience, nuclear capital investment costs are nearly double those of coal-fired generation plants

- The capital investment cost disadvantage of nuclear is balanced by its fuel cost advantages

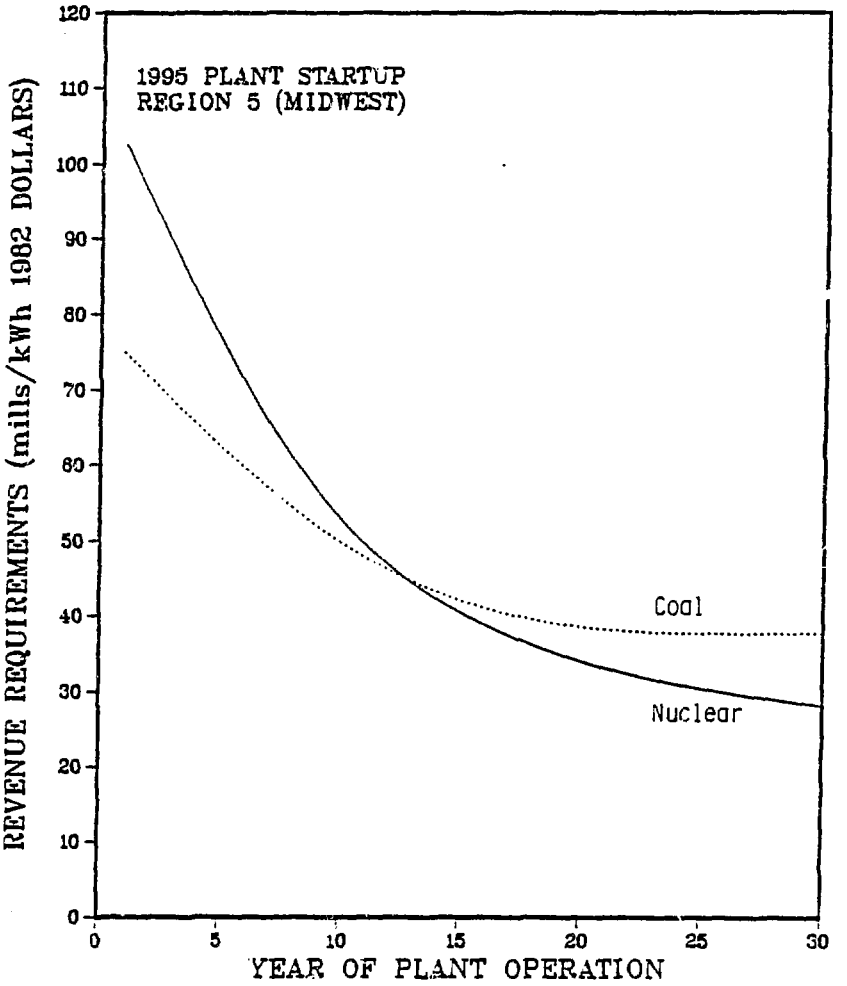
Nuclear plant capital investment costs were estimated to be nearly double those for coal —



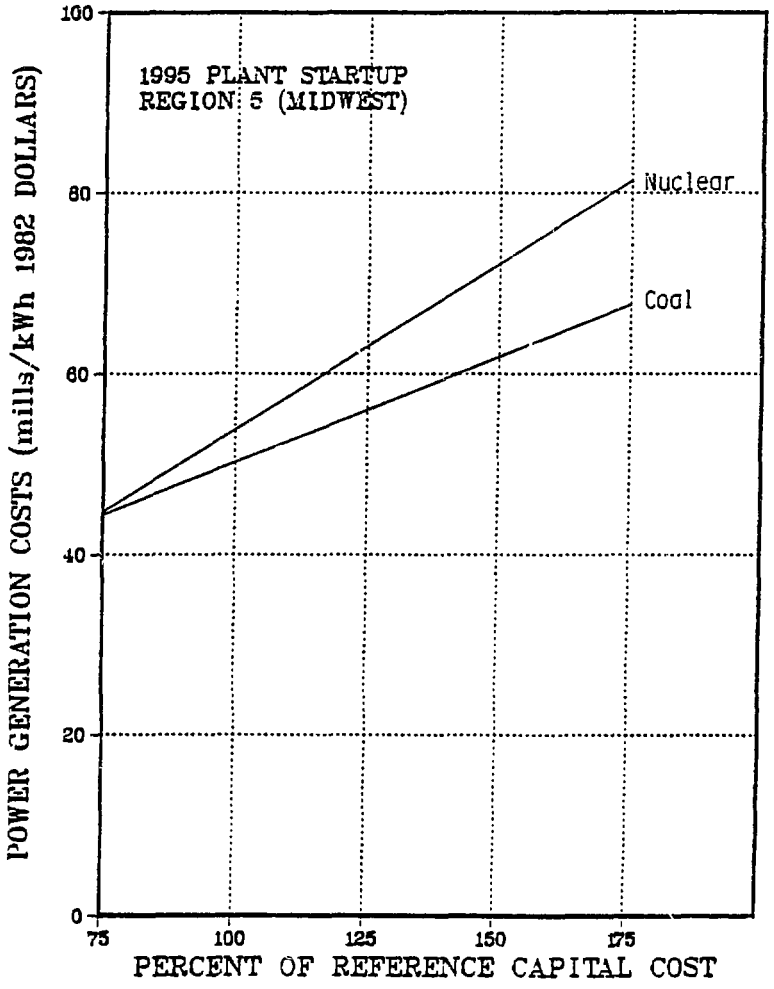
The capital investment cost disadvantage of nuclear is balanced by its fuel cost advantage —



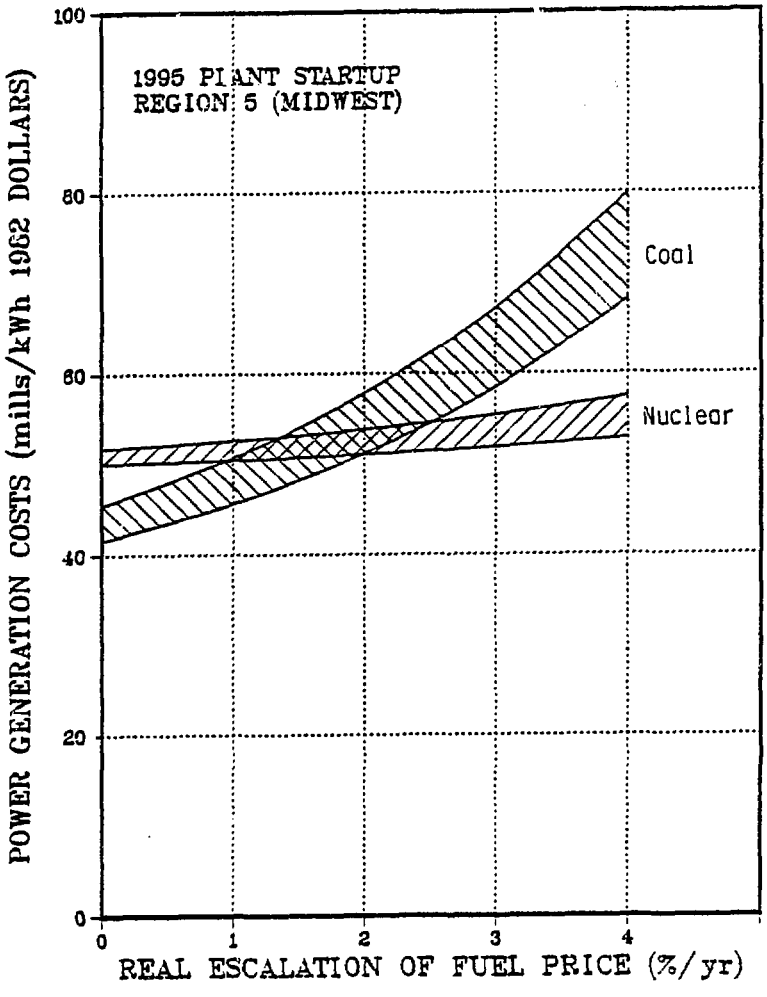
The higher initial capital investment cost of nuclear leads to "rate shock" when the plant is introduced into the rate base —



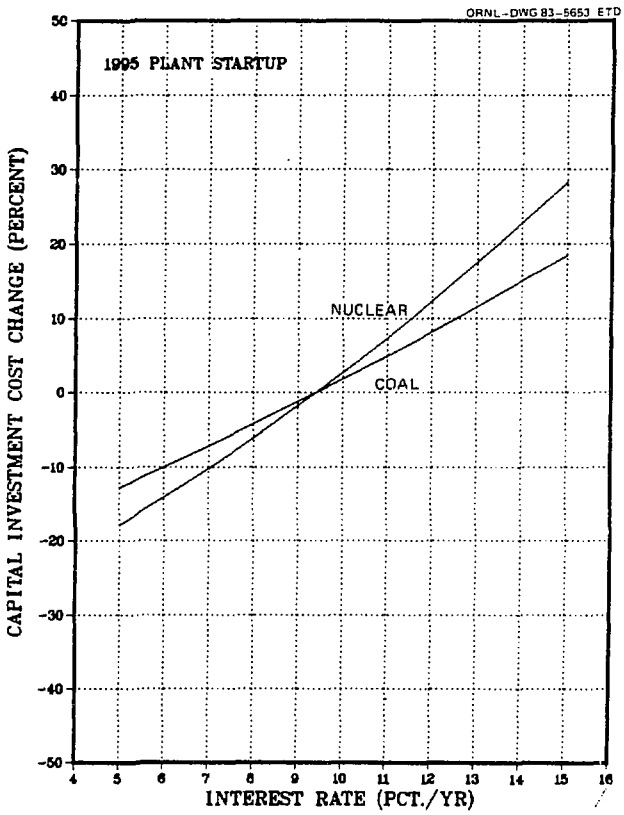
Nuclear power costs are more sensitive to capital investment cost uncertainties than coal —



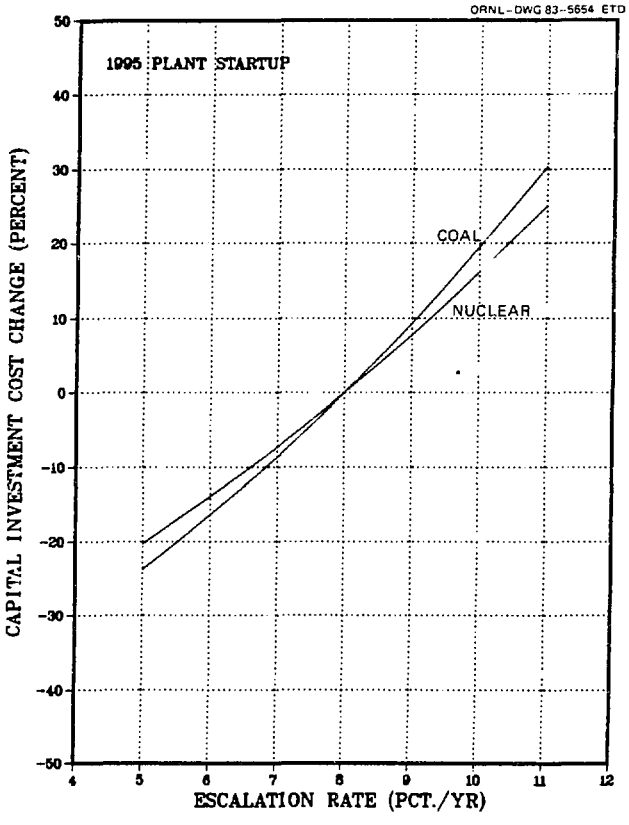
The coal option is much more sensitive to fuel price escalation —



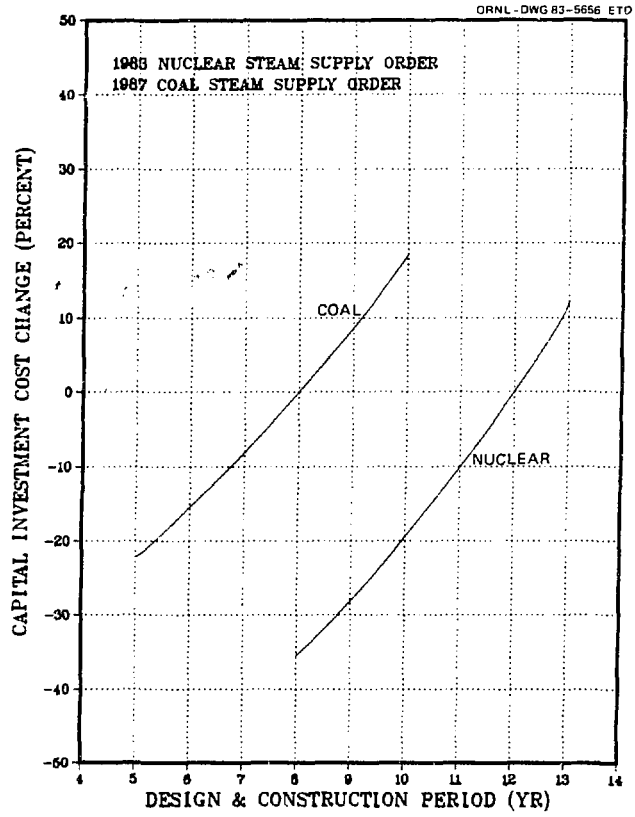
Nuclear is more sensitive to interest rates because of its longer lead time —



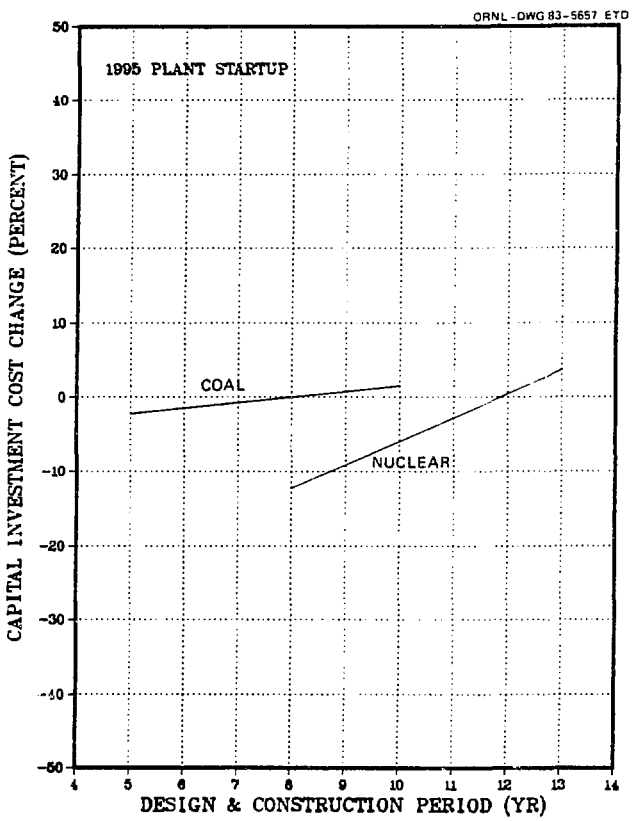
Both coal and nuclear capital investment costs are sensitive to cost escalation and inflation —



For a constant order date, reduction in plant lead time will reduce capital investment costs significantly —

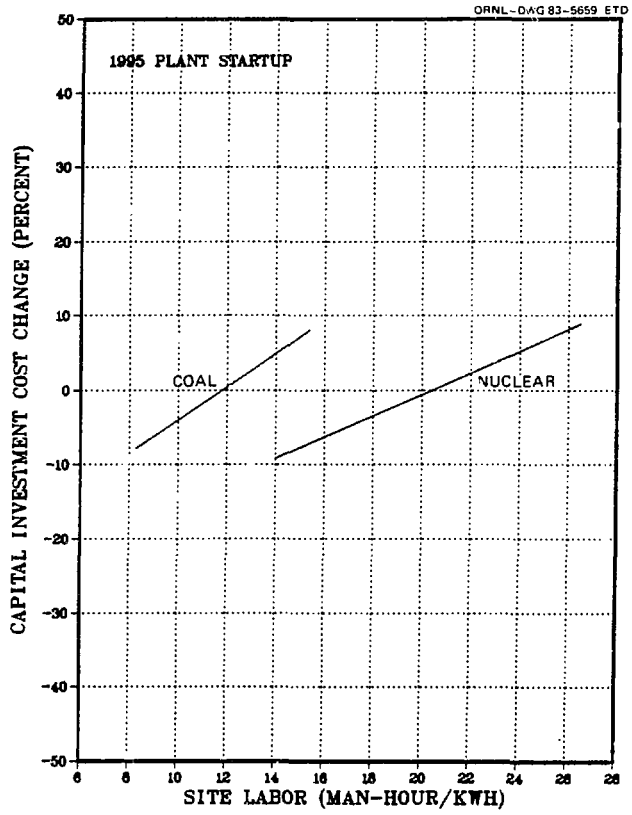


For a constant startup date, reductions in plant lead time will reduce capital investment costs to a lesser degree —

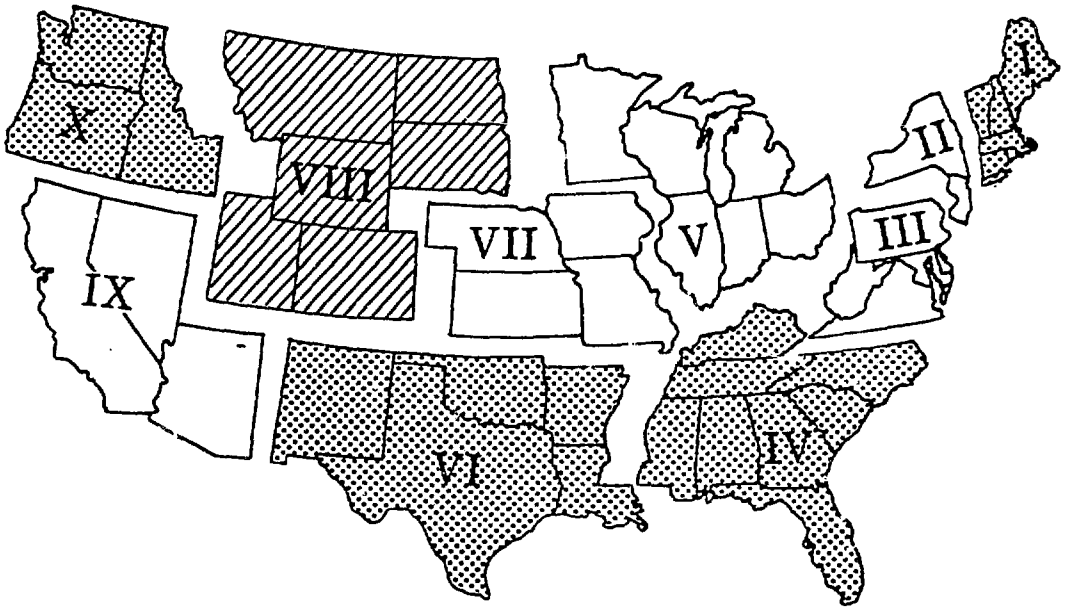


- Later construction start means less interest but more escalation

A reduction in site labor manhours will have a significant effect on capital investment costs —



Reducing the lead time for nuclear plants to 8 years significantly improves its economic position —



ECONOMIC ADVANTAGE FOR NUCLEAR PLANTS (>10% LESS EXPENSIVE THAN COAL)

ECONOMIC ADVANTAGE FOR COAL–FIRED PLANTS (>10% LESS EXPENSIVE THAN NUCLEAR)

ECONOMIC ADVANTAGE OF EITHER PLANT IS <10%

- 1995 startup
- Reduction in labor manhours

WHAT CAN BE DONE TO IMPROVE THE FUTURE ECONOMIC COMPETITIVENESS OF THE NUCLEAR OPTION?

- REDUCE CAPITAL INVESTMENT COST
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□ THROUGH LOWER INFLATION AND INTEREST RATES

□ THROUGH REDUCED LABOR REQUIREMENTS

□ THROUGH LEAD TIME REDUCTION AND CONTROL