S U S I T N A P R O J E C T S T A T U S R E P O R T

F E B R U A R Y 1 9 8 3

SUSITNA PROJECT STATUS REPORT
FEBRUARY 1983

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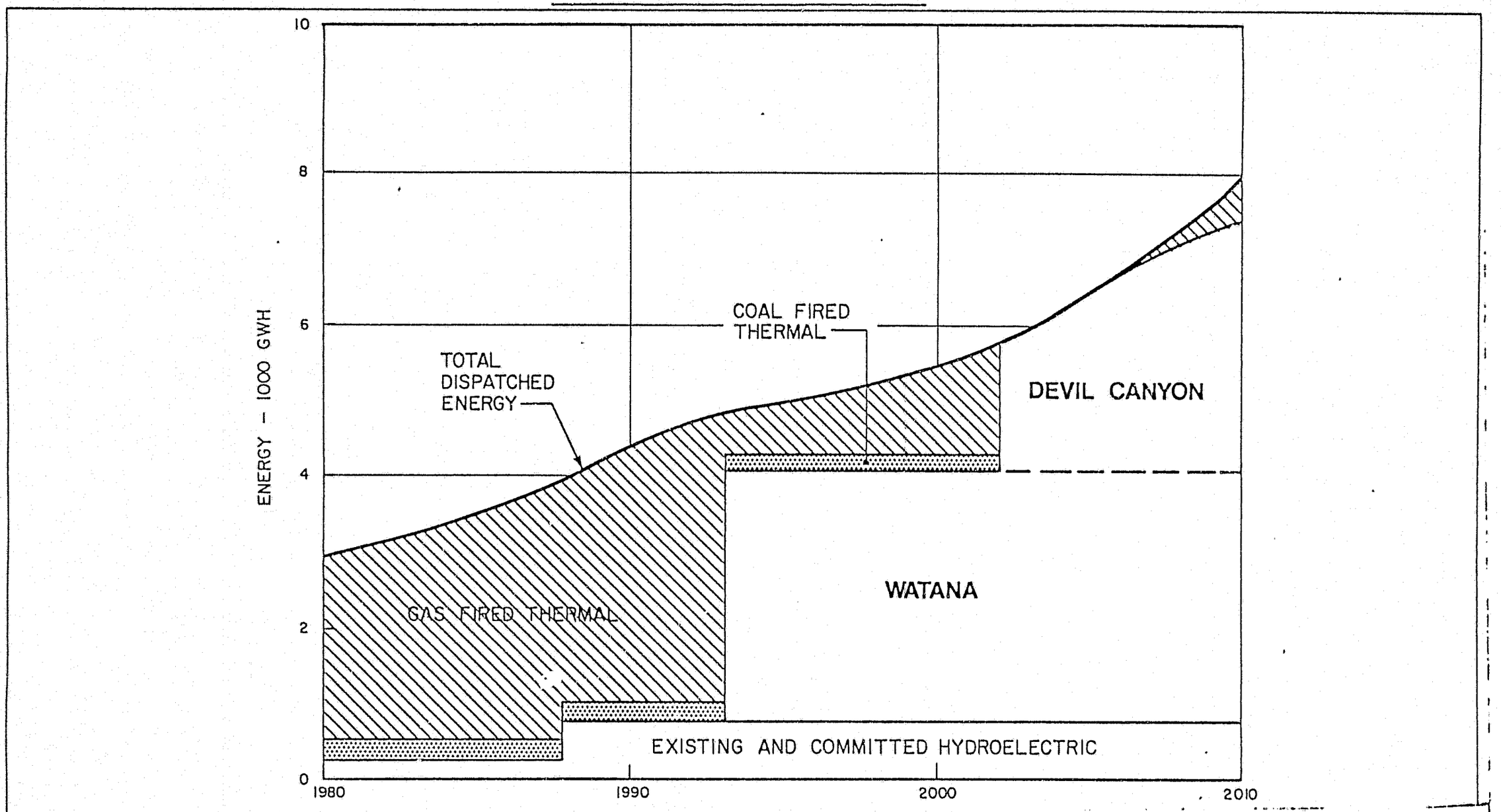
THE SUSITNA PROJECT

	WATANA	DEVIL CANYON
DAM TYPE	ZONED EARTHFILL	CONCRETE ARCH
DAM HEIGHT	885 FEET	645 FEET
RESERVOIR LENGTH	48 MILES	26 MILES
INSTALLED CAPACITY	1,020 MW	600 MW
AVERAGE ANNUAL ENERGY	3,460 GWH	3,340 GWH
TRANSMISSION SYSTEM	345 KV	345 KV
COST ($ 1982)	3.58 BILLION	1.57 BILLION
COST (@ 6% INFLATION)	5.74 BILLION	---
COMMISSIONING DATE	1993	2002

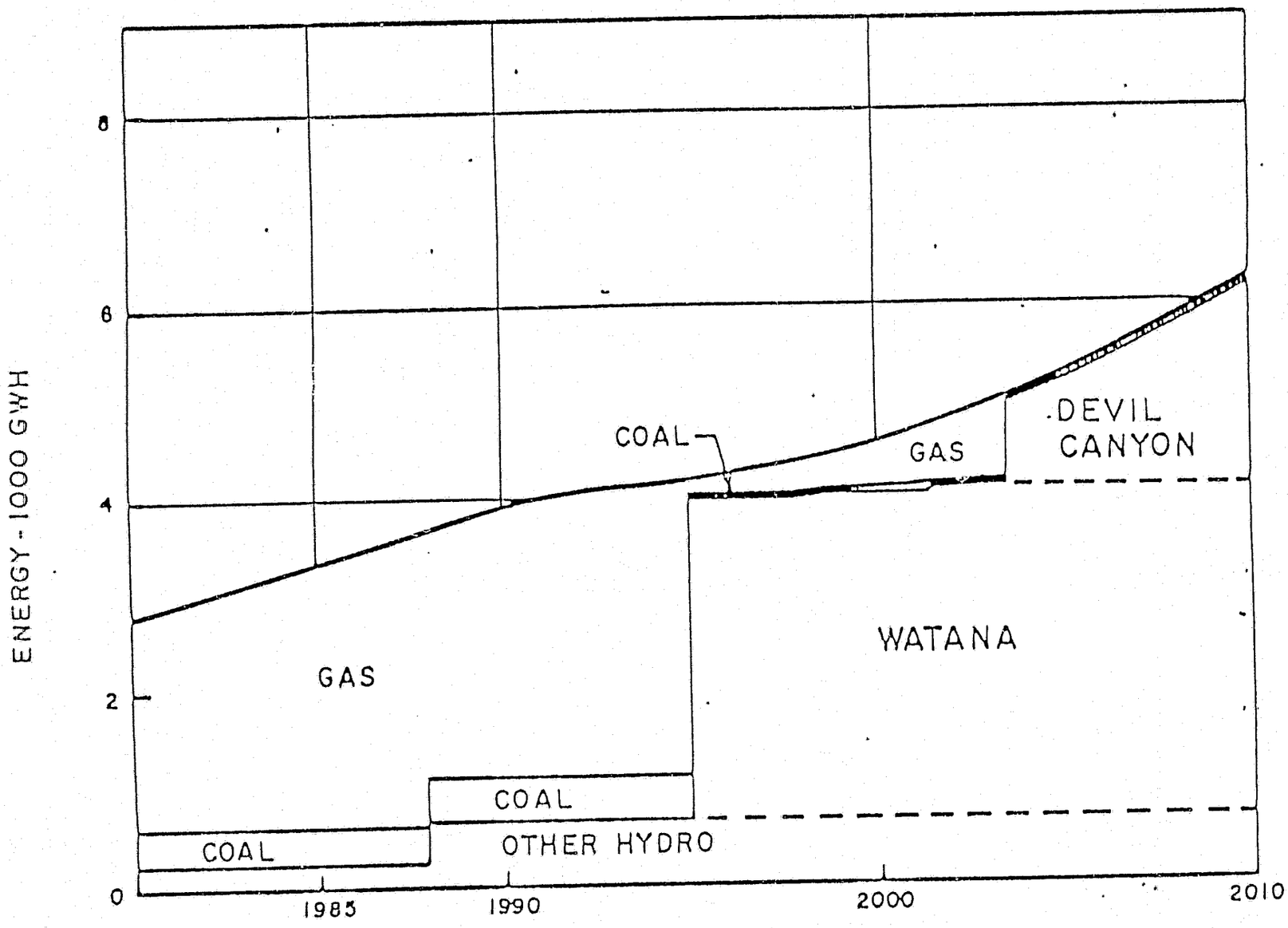
PROJECT PURPOSE

- MEET RESERVE MARGINAL AND ENERGY REQUIREMENTS
- REDUCE OVERALL COST OF THE GENERATING SYSTEM



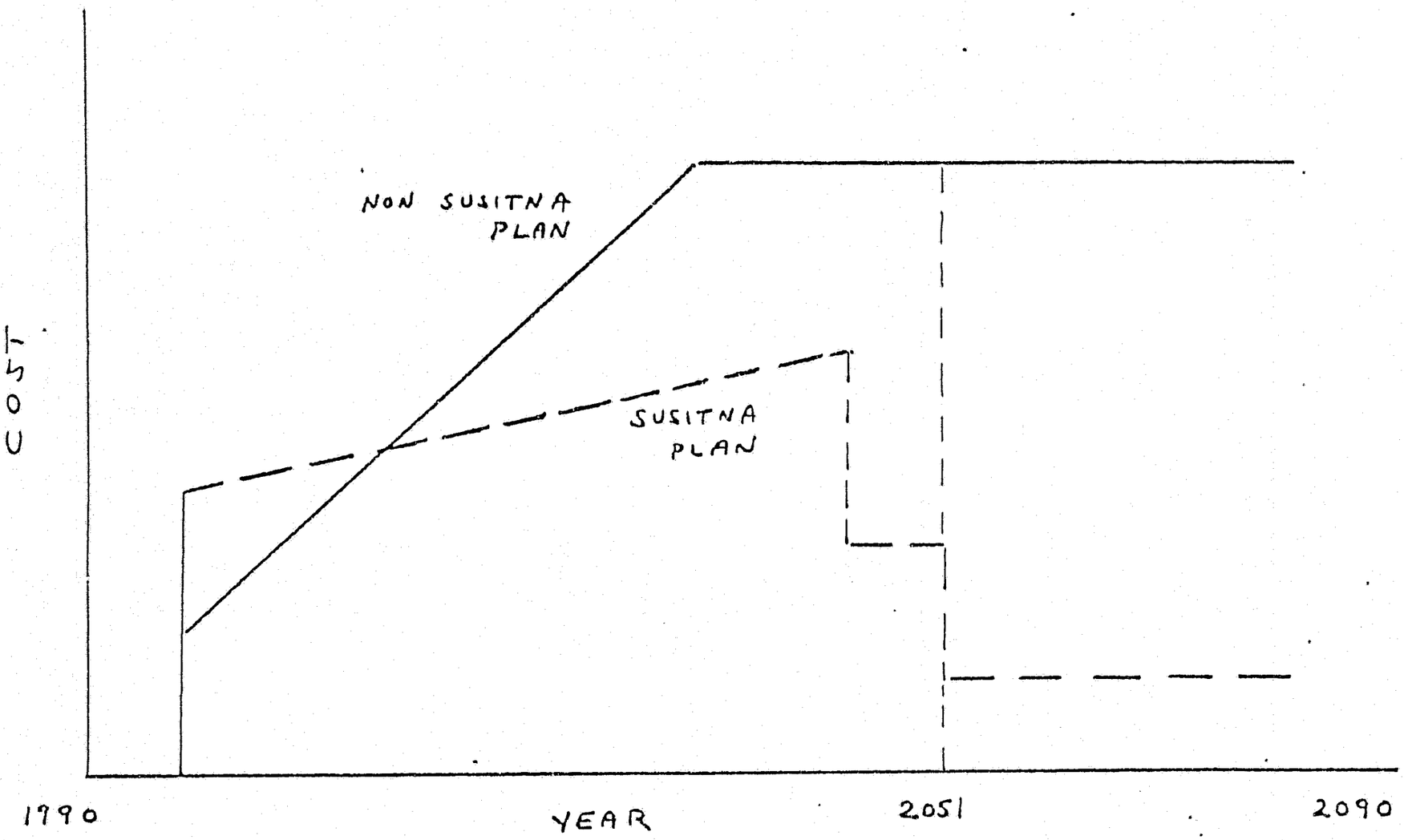
Medium Load Forecast

USE OF SUSITNA GENERATION



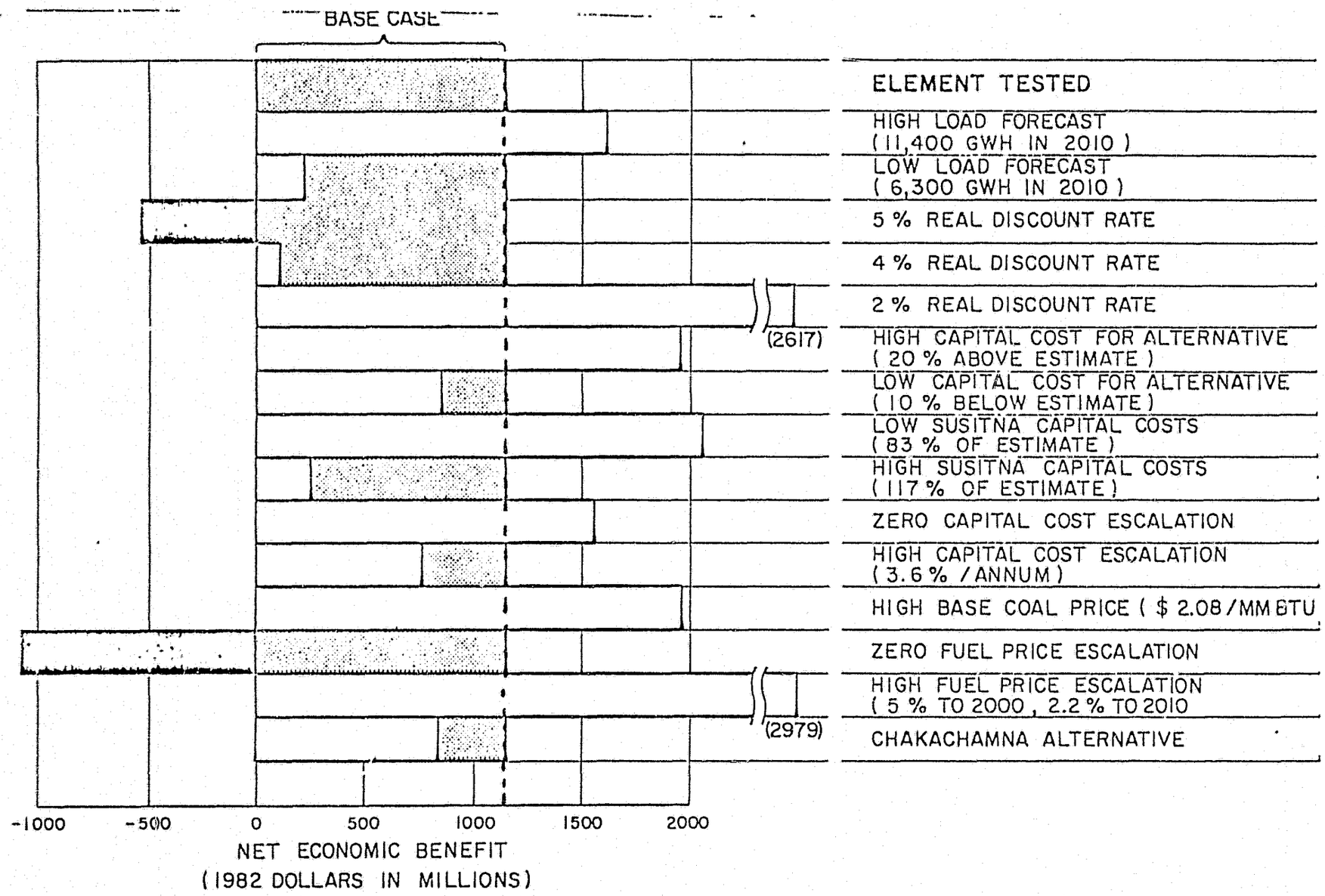
LOW LOAD FORECAST

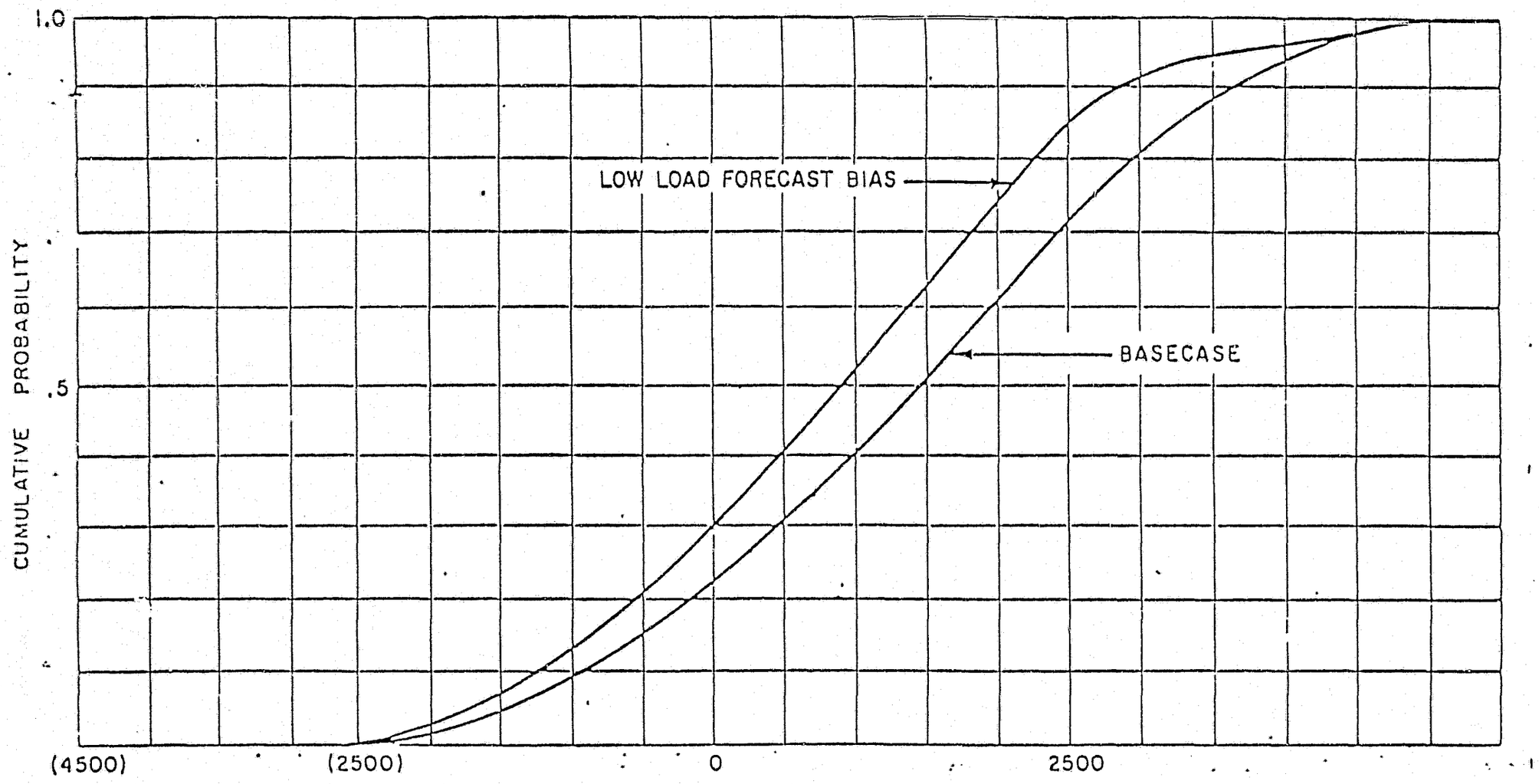
ECONOMIC FEASIBILITY TEST



SYSTEM COSTS WITHOUT SUSITNA (A)
COMPARED TO
SYSTEM COSTS WITH SUSITNA (B)
(A-B) = NET BENEFITS OF SUSITNA PLAN

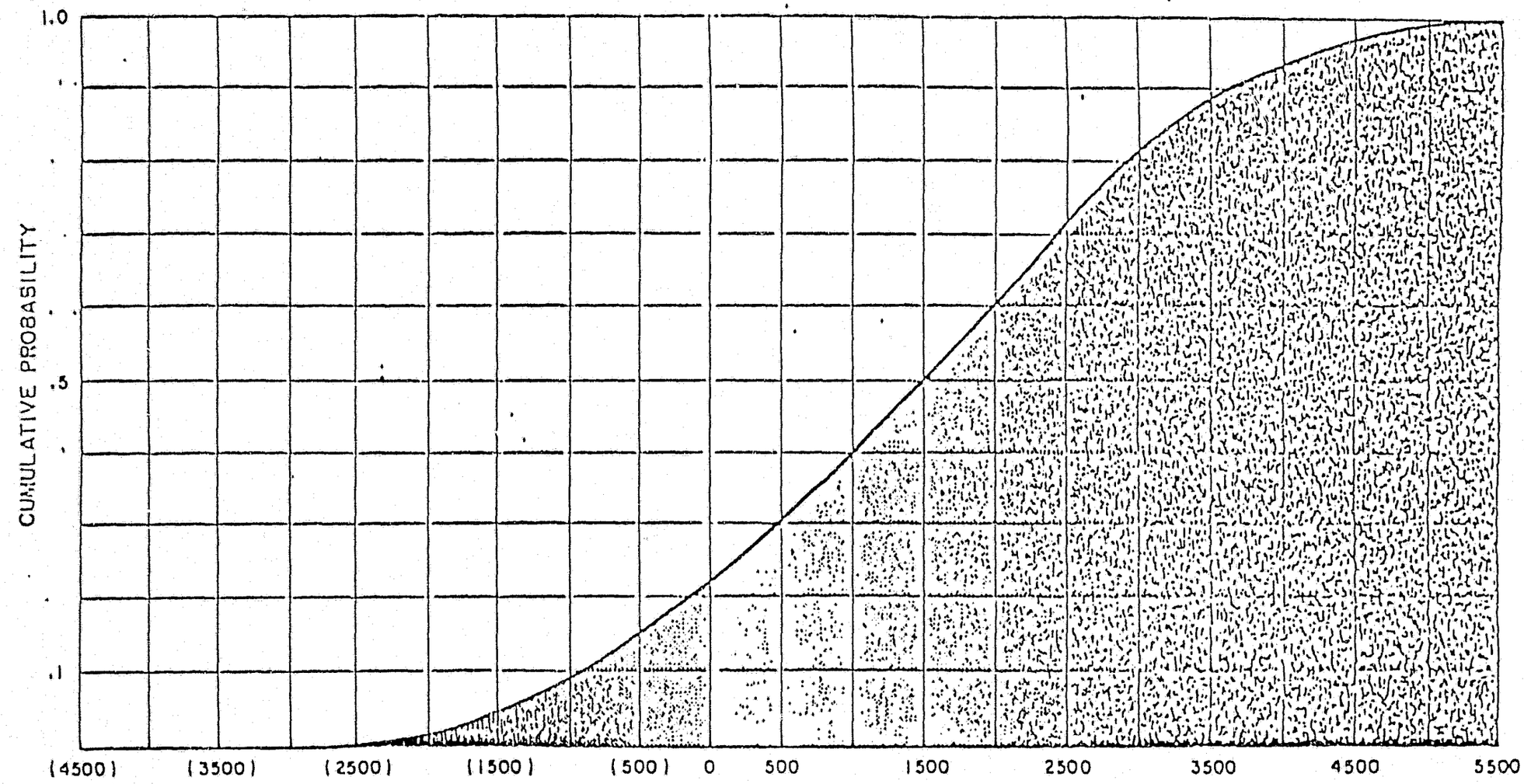
SENSITIVITY ANALYSIS





ASSIGNMENT OF PROBABILITIES

	Low	Medium	High
Feasibility Study	0.2	0.6	0.2
Alternative Outlook	0.6	0.3	6.1



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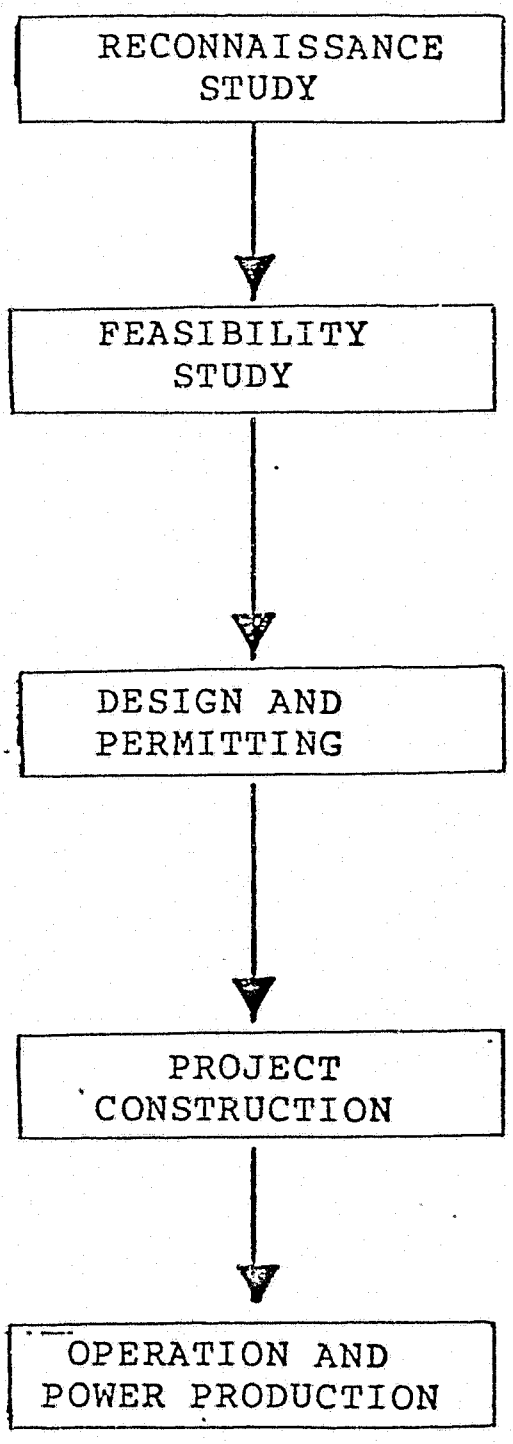
MULTIVARIATE ANALYSIS

	Low	Medium	High
Load Forecast	0.2	0.6	0.2
Susitna Capital Cost	0.60	0.25	0.15
Fuel Cost Escalation	0.25	0.50	0.25

FIVE STAGES OF PROJECT DEVELOPMENT



PRELIMINARY ANALYSIS.
NARROW RANGE OF OPTIONS

DETAILED ALTERNATIVES COMPARISON.
FEASIBILITY LEVEL COST ESTIMATE.
INDEPENDENT COST ESTIMATE.
FINANCE OPTIONS.

FINAL COST ESTIMATE.
CONSTRUCTION DECISION.
FINAL FINANCE PLAN.
POWER SALES AGREEMENTS.

OPERATION AND MAINTENANCE AGREEMENTS.

PREREQUISITES TO CONSTRUCTION

- 100 PERCENT DESIGN COMPLETION FOR INITIAL CONTRACTS.
- ACCEPTABLE MASTER LABOR AGREEMENT.
- FINAL PRE-CONSTRUCTION COST ESTIMATE.
- POWER SALES AGREEMENTS.
- FERC LICENSE AND OTHER MAJOR PERMITS.
- EXTERNAL REVIEW PANEL CONCURRENCE WITH DESIGN, SAFETY, AND MITIGATION MEASURES.
- FINANCE PLAN WITH FUNDING SOURCE ESTABLISHED.
- TAX EXEMPT STATUS RULING FOR REVENUE BONDS.
- LEGISLATIVE AUTHORIZATION.
- POWER AUTHORITY DECISION TO CONSTRUCT.
- PROJECT LANDS ACQUIRED.

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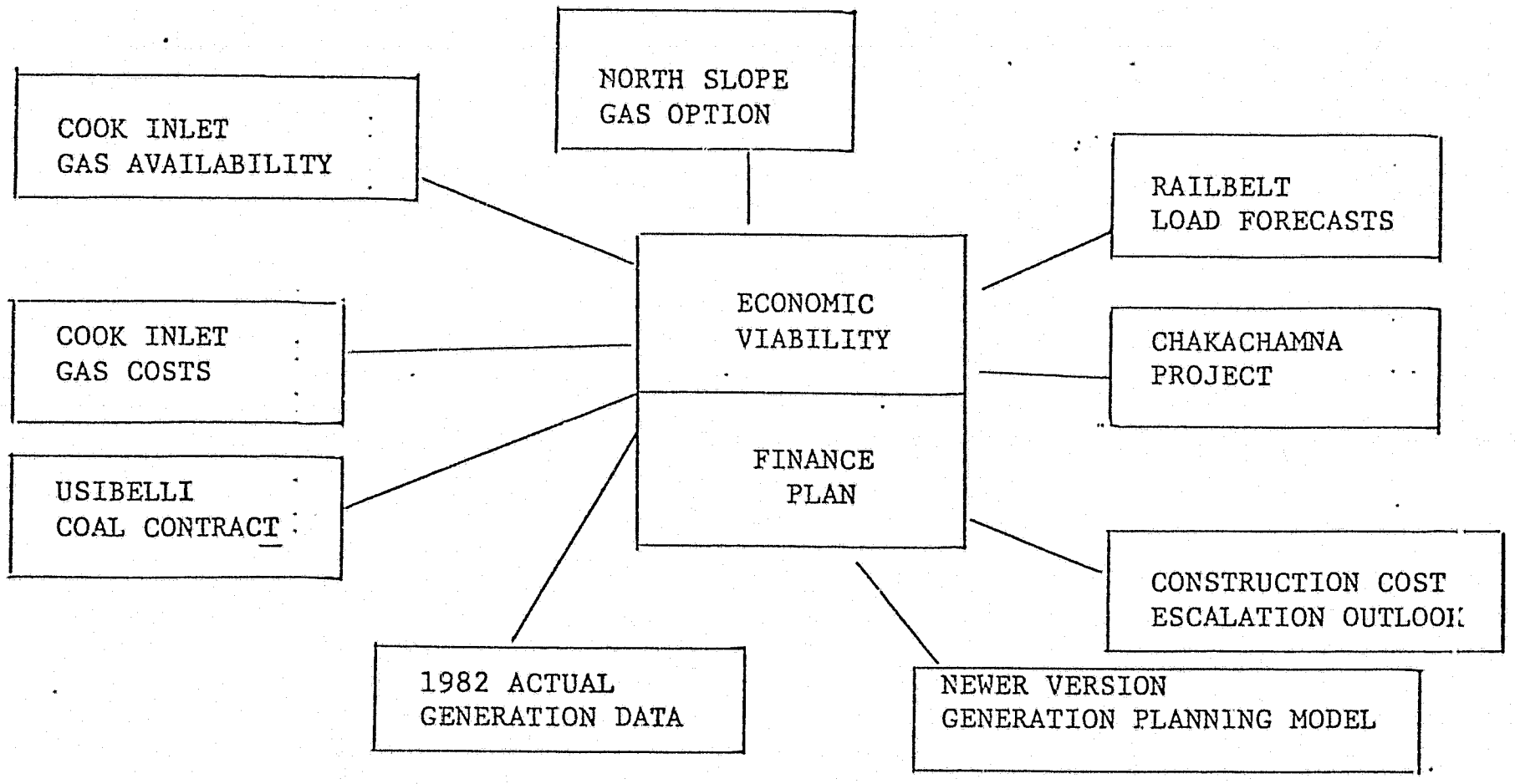
- LEGISLATIVE AUTHORIZATION.
- POWER AUTHORITY DECISION TO CONSTRUCT.
- PROJECT LANDS ACQUIRED.

LAND ACQUISITION SCHEDULE

JANUARY 1980 - DECEMBER 1982	o IDENTIFY PROJECT LANDS o IDENTIFY LAND STATUS
MARCH - JULY 1983	o PRIORITIZE ACQUISITION o EFFECT CONVEYANCE OF STATE AND NATIVE SELECTED LANDS
JULY 1983 - JANUARY 1985	o NEGOTIATE WITH PRIVATE LANDOWNERS o ACQUIRE ROW, LEASES

SPRING 1983 UPDATE



PROJECT COST HISTORY ($ MILLIONS)

PROJECT	ESTIMATE AT CONSTRUCTION DECISION	CURRENT ESTIMATE
TYEE	102-110	125
SWAN	875	935
TERROR		
LOW DAM	185	
HIGH DAM	189	189
INTERTIE	131	131

TYEE PROJECT COST ESTIMATE HISTORY

SOURCE	NOMINAL COST ($1000)
IECO (DECEMBER 1979)	49,491
IECO (SEPTEMBER 1980)	59,086
EBASCO (JUNE 1981)	104,581
IECO (JUNE 1981)	87,640
EBASCO (JUNE 1981)	109,430
CONSTRUCTION DECISION - SEPTEMBER 1981	
IECO (AUGUST 1982)	115,889
IECO (NOVEMBER 1982)	117,892
IECO (JANUARY 1983)	123,666

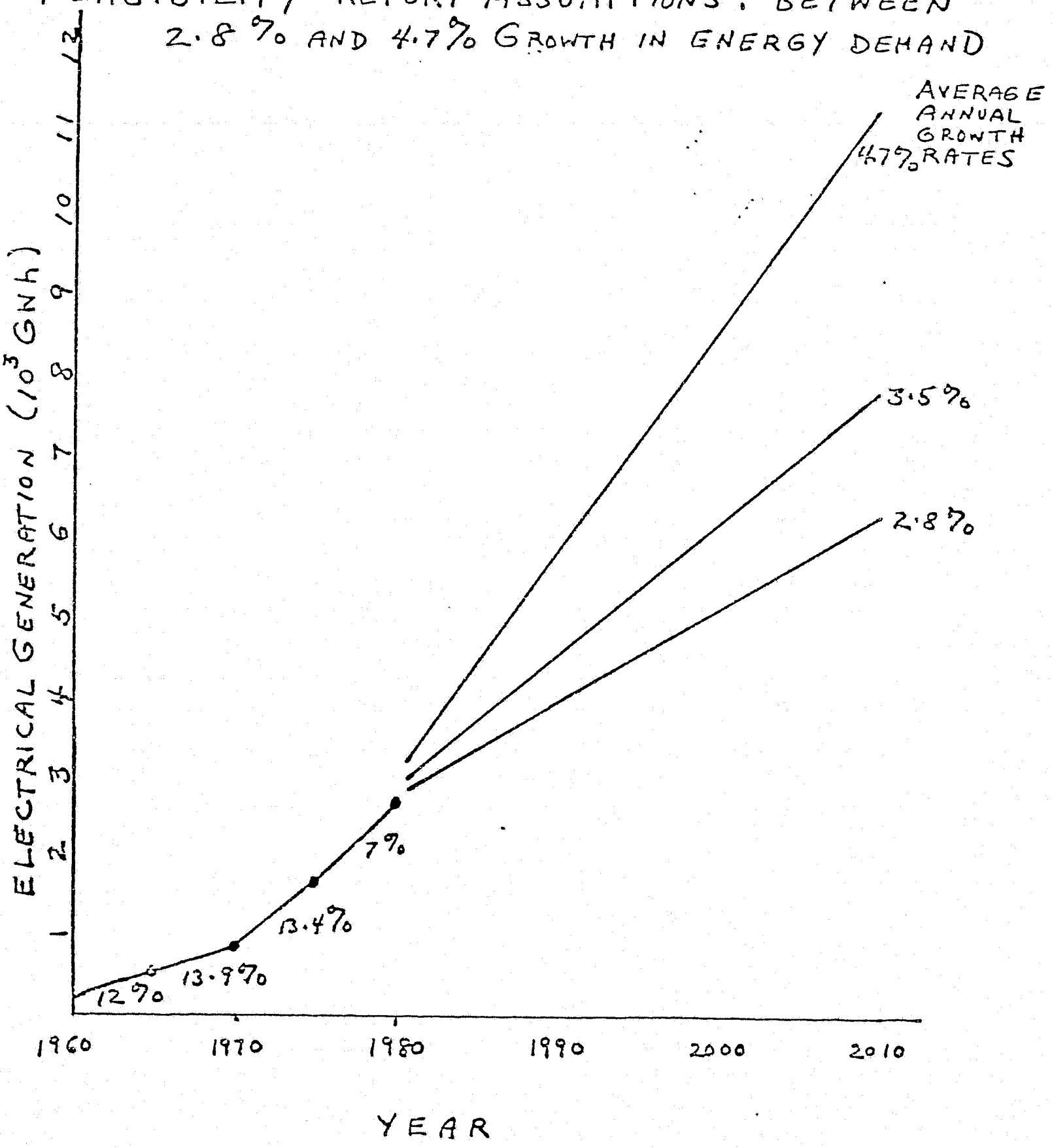
I M P O R T A N T P A R A M E T E R S

	LOW	BASE	HIGH
LOAD FORECAST (in 2010) ANNUAL GROWTH RATE	6,300 GWh (2.8%)	7,800 GWh (3.5%)	11,400 GWh (4.7%)
DISCOUNT RATE (CONSTANT $)	2%	3%	5%
SUSITNA CAPITAL COSTS (CONTINGENCY)	0%	20%	40%
CAPITAL COST ESCALATION	0%	2%	4%
FUEL PRICE ESCALATION*			
BELUGA COAL ($1.51/MMBTU)**	0%	2.1%/1.2%	4.2%/2.2%
NATURAL GAS ($3.00/MMBTU)	0%	2.5%/2.0%	5.0%/2.0%
OIL ($6.50/MMBTU)	0%	2.5%/2.0%	5.0%/2.0%

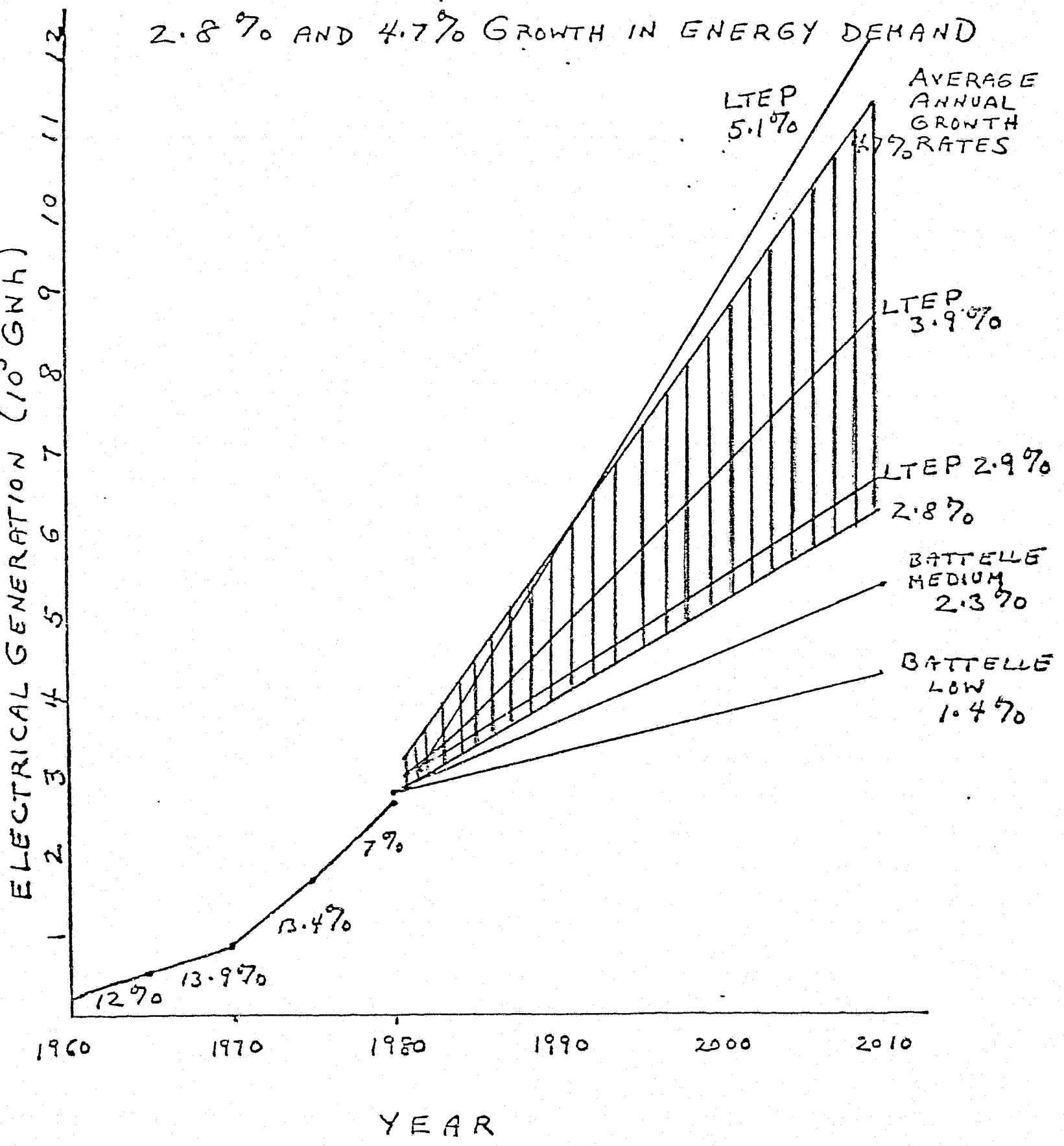
* (1982-2000)/2001-2010)
** 1982 Price Estimate

LOAD FORECAST

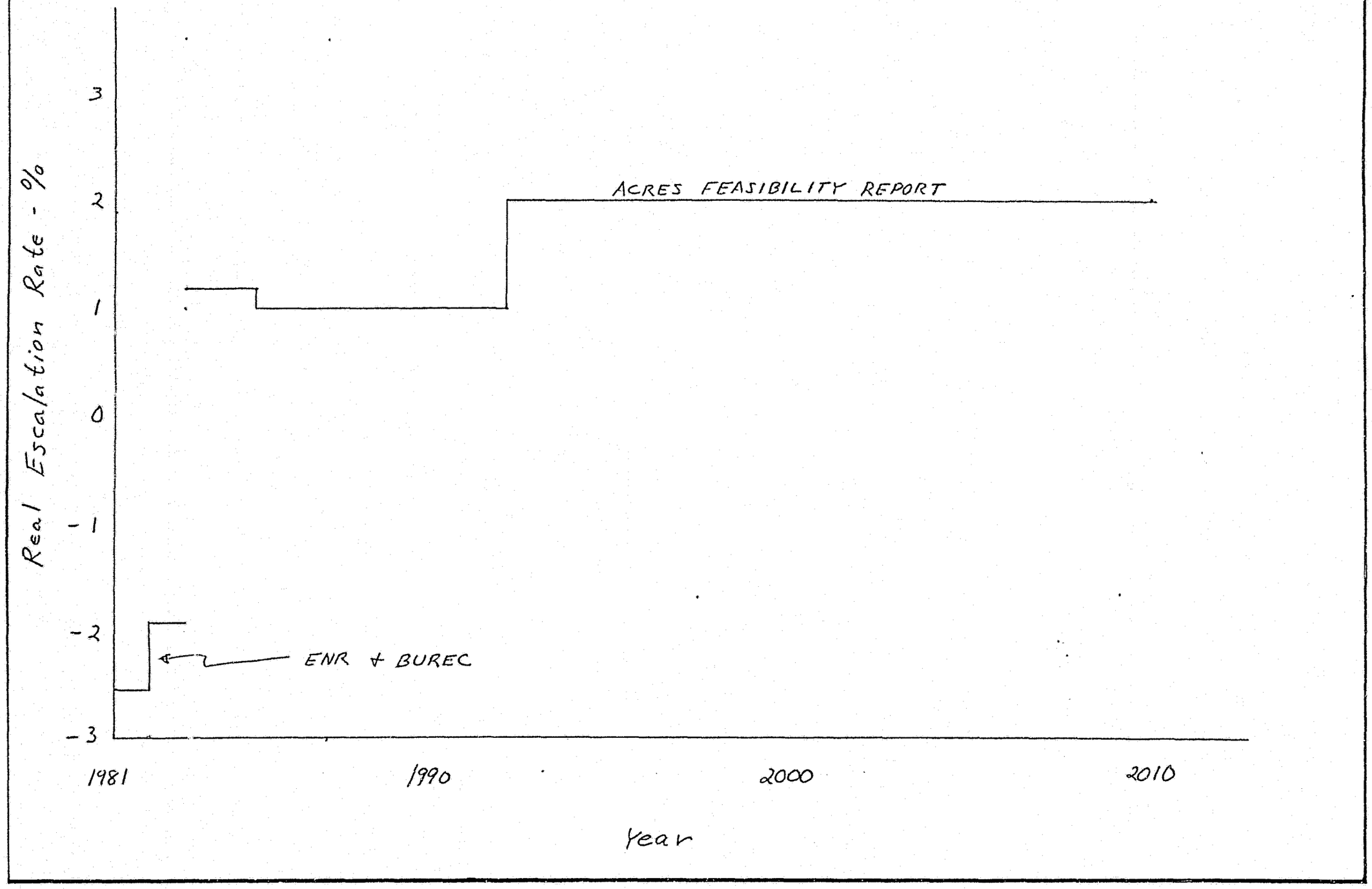
FEASIBILITY REPORT ASSUMPTIONS: BETWEEN 2.8% AND 4.7% GROWTH IN ENERGY DEMAND

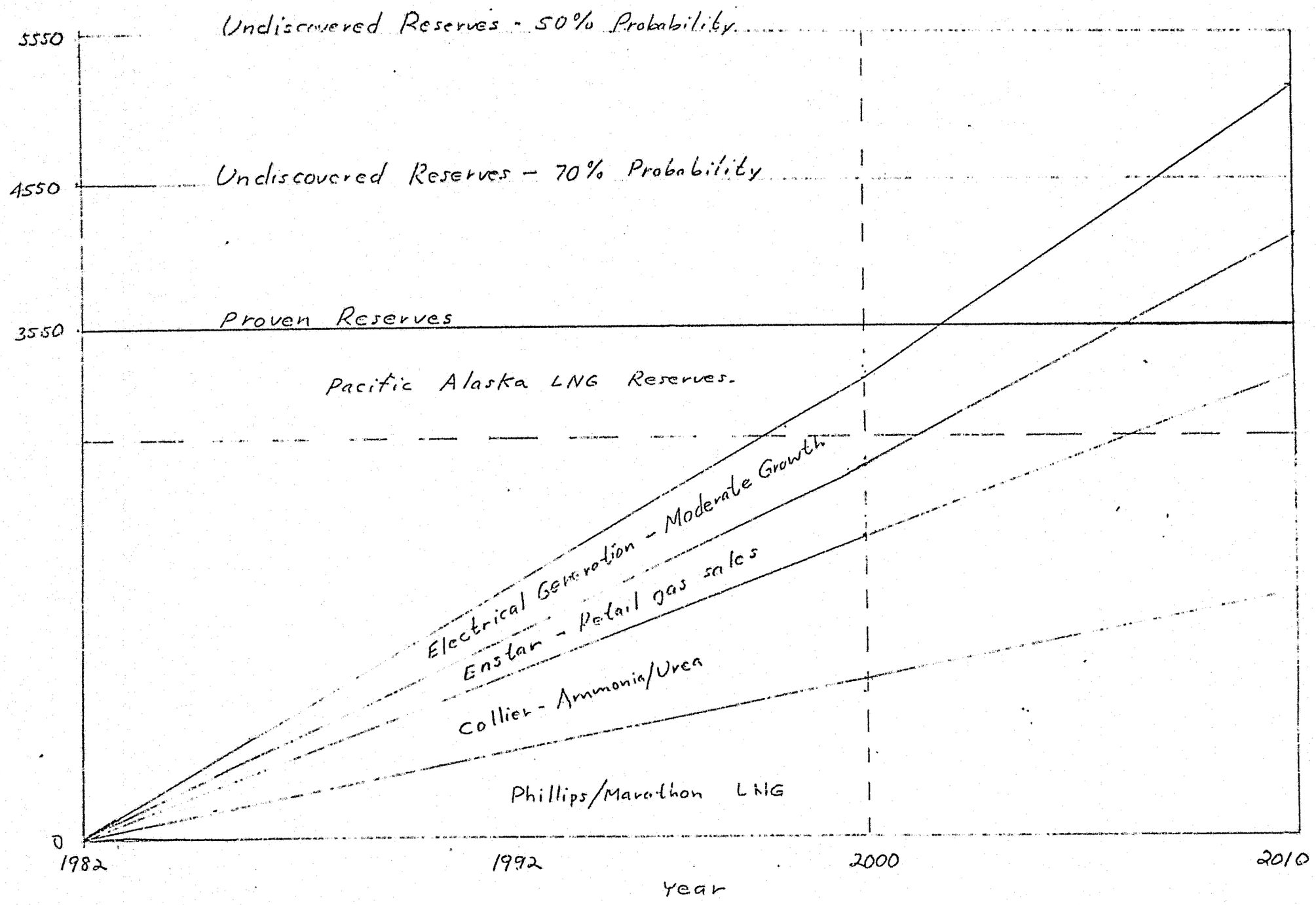


LOAD FORECAST UPDATE



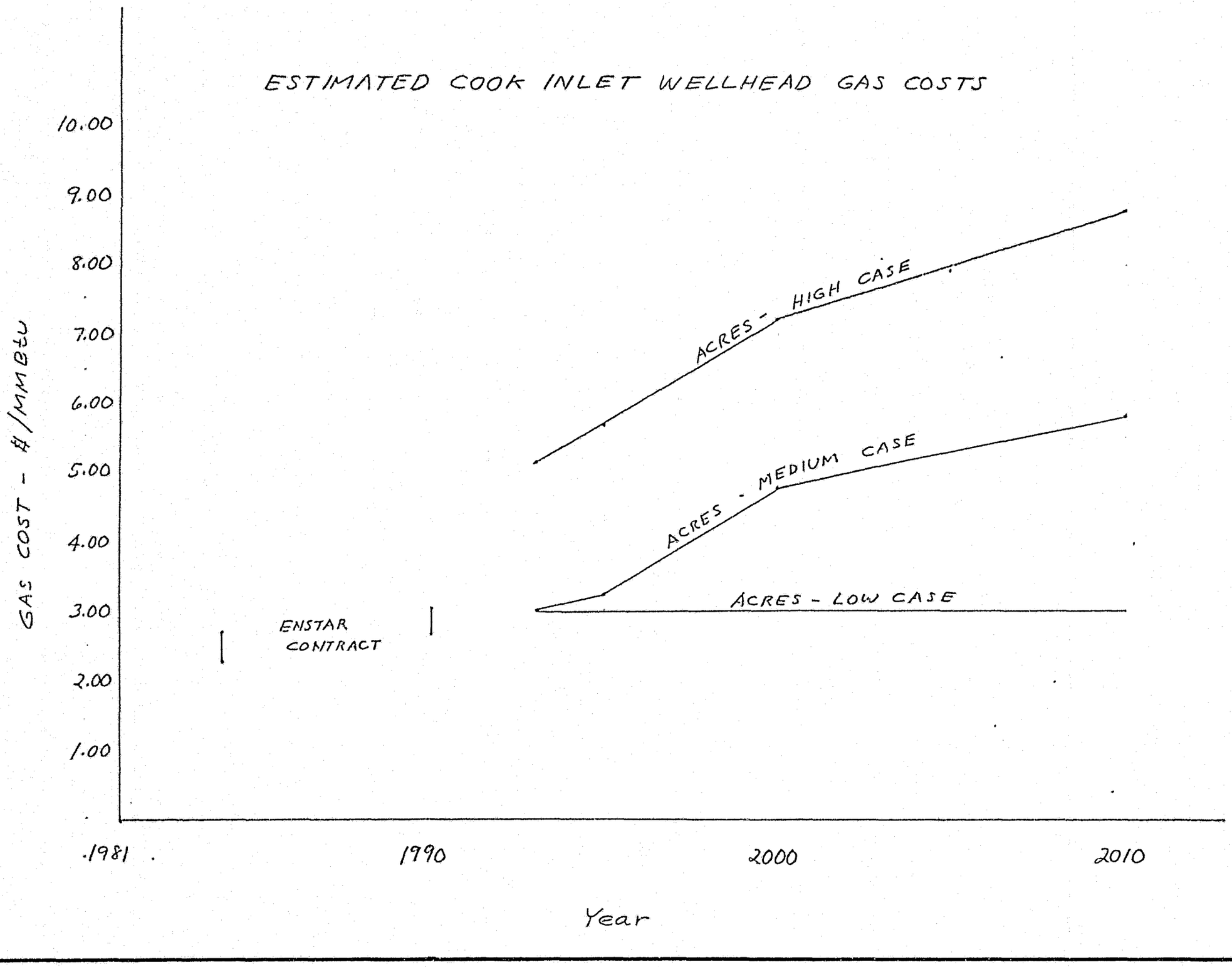
CONSTRUCTION COST ESCALATION



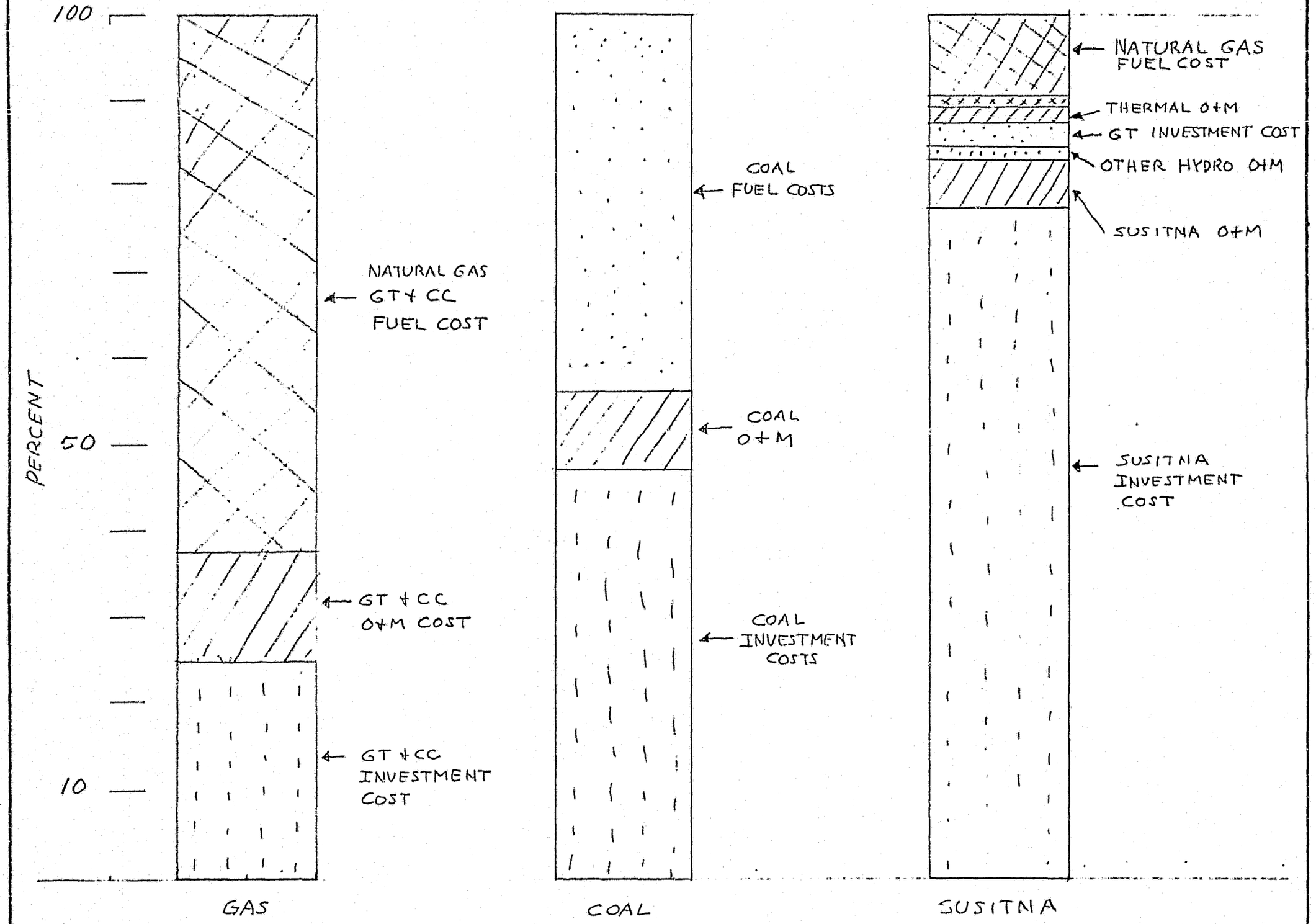


COOK INLET NATURAL GAS SUPPLIES
AND ESTIMATED CONSUMPTION

ESTIMATED COOK INLET WELLHEAD GAS COSTS



SUSITNA PROJECT ADVANTAGES



YEAR 2010 COST MIX

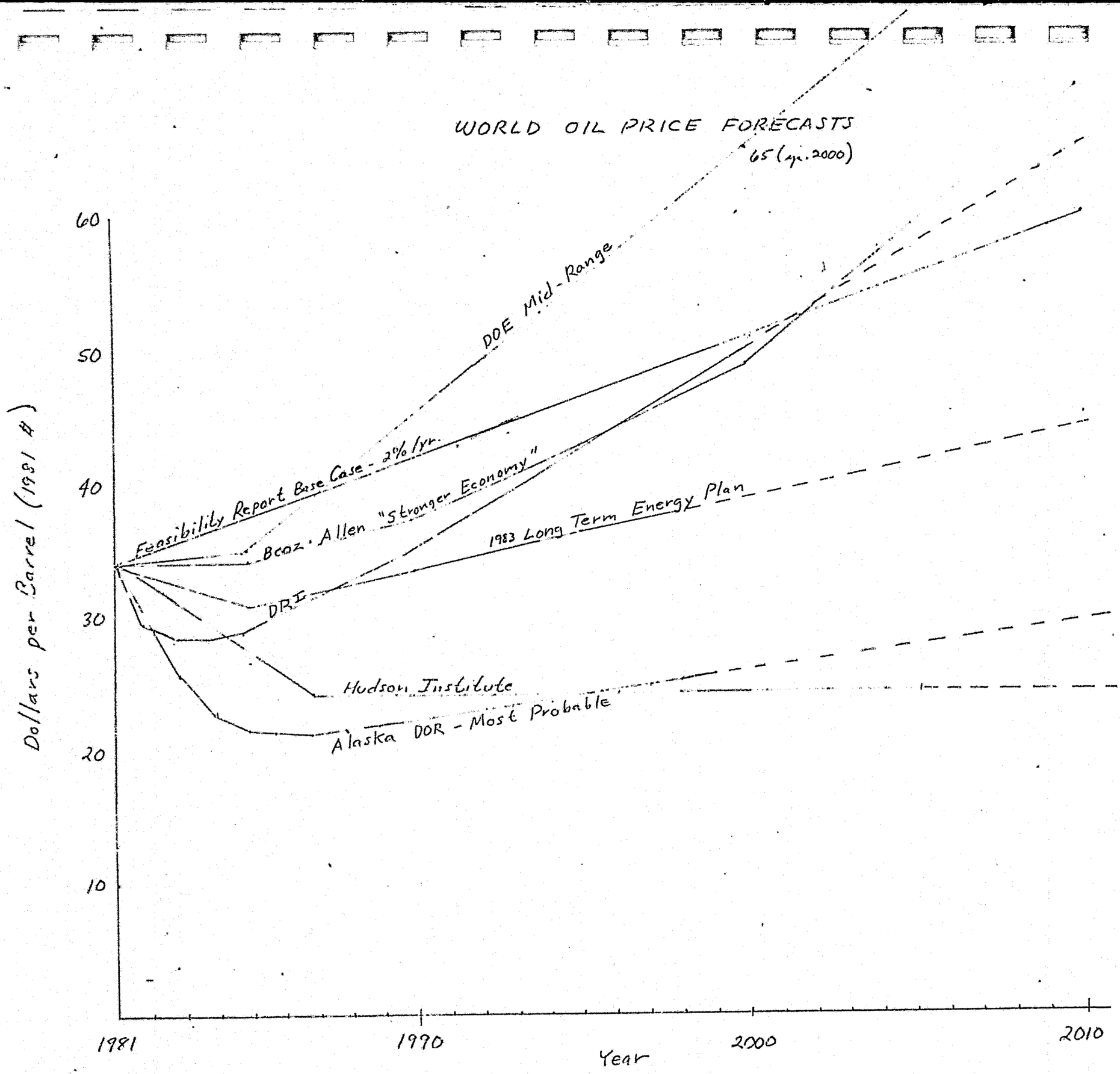
NORTH SLOPE GAS OPTION

- DRAFT REPORT UNDER REVIEW
- THREE OPTIONS
- SITING, CONCEPTUAL DESIGN, FACILITY COST ESTIMATES

CHAKACHAMNA PROJECT

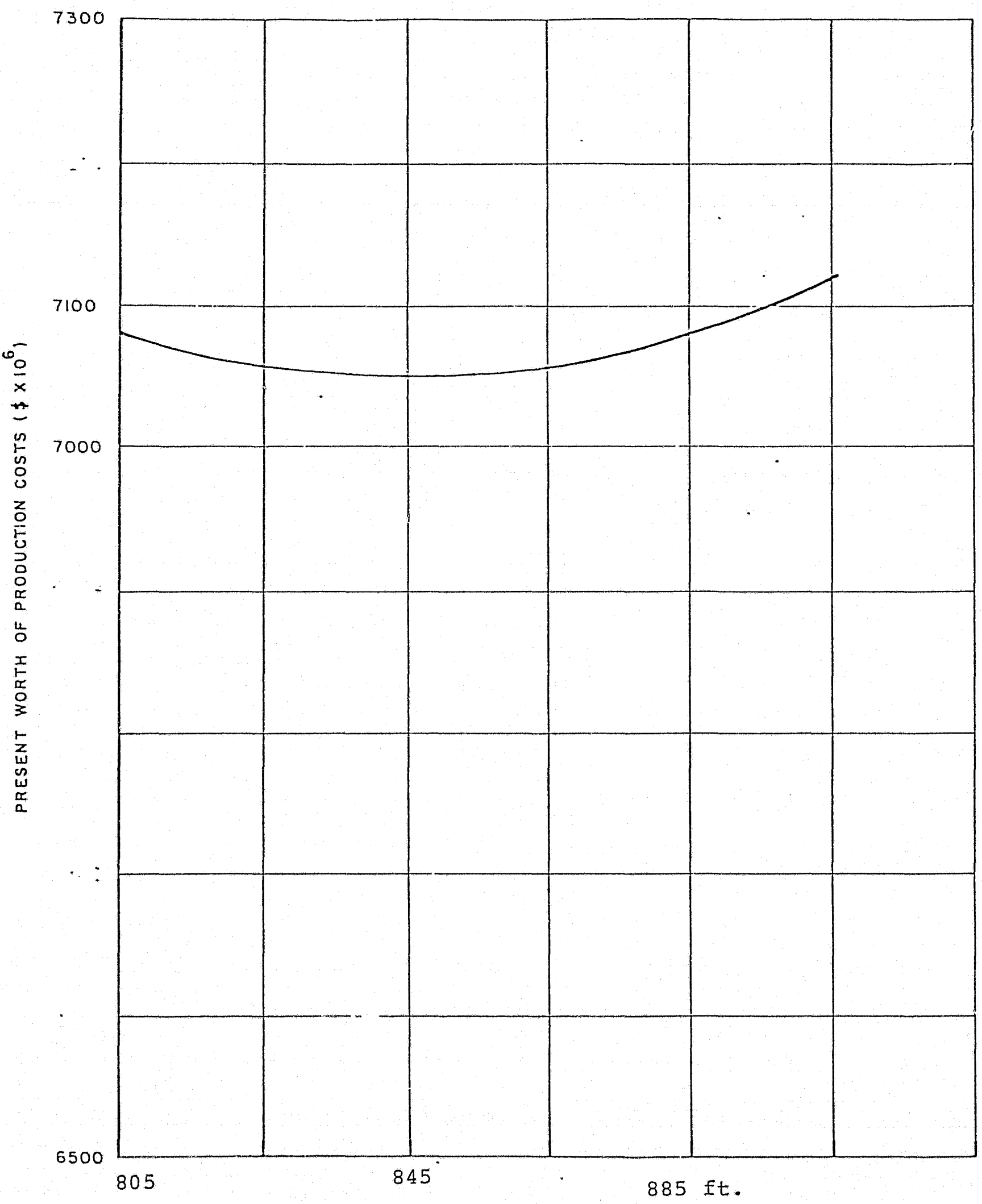
	FEASIBILITY STUDY	UPDATE
CAPACITY	330 MW	330 MW
FIRM ANNUAL ENERGY	1,374 GWh	1,236 GWh
ANNUAL GENERATION	1,446 GWh	1,301 GWh
TOTAL COST (1982 $)	$1.45 BILLION	$1.32 BILLION
TOTAL COST ENERGY*	43.5 MILLS/KWh	44.5 MILLS/KWh

* Includes 15 MILLS PER KWh FOR O+M


WORLD OIL PRICE FORECASTS
'65 (yr. 2000)
DOE Mid-Range
Feasibility Report Base Case - 2% /yr.
Booz. Allen "Stronger Economy"
1983 Long Term Energy Plan
DRI
Hudson Institute
Alaska DOR - Most Probable
60
50
40
30
20
10
Dollars per Barrel (1981 $)
1981
1990
2000
2010
Year

PROJECT SCALE

Feasibility Report Recommendations: Watana Dam Height 885 ft.



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WATANA DAM HEIGHT REDUCTION
CURRENTLY UNDER STUDY

DAM HEIGHT	885 FEET	800 FEET	700 FEET
FILL QUANTITY	62 MILLION CY	46 MILLION CY	29 MILLION CY
TIME OF CONSTRUCTION	9 YEARS	8 TO 9 YEARS	7 TO 8 YEARS
ANNUAL ENERGY	3450 GWh	3040 GWh	2550 GWh
CONSTRUCTION COST ($1982)	3.58 BILLION	3.2 BILLION	2.8 BILLION
PROBABLE COST REDUCTIONS	--	10%	20%

EXECUTIVE DIRECTOR RECOMMENDATIONS

- DILIGENTLY PURSUE FERC LICENSE APPLICATION AND OTHER PERMITS
- CONTINUE TO REVIEW PROJECT SCALE AND TIMING
- ACQUIRE PROJECT LANDS
- COMPLETE CONCEPTUAL DESIGN REPORT AND SUPPORTING INVESTIGATIONS
- ESTABLISH CONSTRUCTION FUND

TECHNIQUES FOR SUSITNA COST CONTROL

- EMPHASIS ON "HIGH CONFIDENCE" ESTIMATE
- INDEPENDENT ESTIMATE
- EARLY CM INVOLVEMENT
- MAXIMUM PRE-CONSTRUCTION SITE INVESTIGATION
- 100% DESIGN PRIOR TO BIDDING
- RIGOROUS CHANGE CONTROL PROCEDURE
- MASTER LABOR AGREEMENT
- FIRM FIXED-PRICE CONTRACTS

CONSTRUCTION MANAGEMENT INVOLVEMENT

- CONSTRUCTABILITY REVIEWS
- LOGISTICS AND CONSTRUCTION FACILITIES PLANNING
- CONTRACT PACKAGING
- LABOR AGREEMENT NEGOTIATIONS
- CONTRACTOR TYPE COST ESTIMATES
- CHANGE CONTROL

POWER AUTHORITY RECOMMENDATIONS

APRIL 1982

- CONTINUE PER-CONSTRUCTION DEVELOPMENTAL EFFORTS
- SUBMIT A FERC LICENSE APPLICATION
- INITIATE DESIGN