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SUPPLY AND DEMAND FOR ENERGY IN THE UNITED STATES BY STATES AND REGIONS, 1960 AND 1965

(In Four Parts)

3. Dry Natural Gas



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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1969

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State University of New York
at Stony Brook

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By Lulie H. Crump

* * * * * information circular 8403



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

FOREWORD

Each year the Bureau of Mines Minerals Yearbook features an annual energy balance by source, form, and end-use. It has been suggested that this national balance would be improved if it were prepared within the context of prior State and regional balances, and interregional energy flows.

Unfortunately, supply and demand data on a State-by-State basis for various energy sources, forms, and markets are not readily available. This study attempts to correct this deficiency by constructing an energy model at the State and regional levels and quantifying this with available data and information. The study is presented in four parts: (1) Coal, (2) Utility Electricity, (3) Natural Gas, and (4) Petroleum and Natural Gas Liquids. Data are shown for the years 1960 and 1965.

The State and regional commodity balances presented in the four parts of the study are compatible with and additive to the Yearbook's national balances for 1960 and 1965. This compatibility was achieved by using the national energy model as a base for the State and regional models; by standard presentation of energy components within a 50-State, three-region, and seven-subregion framework; and by the use of standard units as well as energy equivalents (British thermal units). The separate commodity balances and flows are also designed to serve as inputs for the construction of integrated energy balances at the State, regional, and national levels. These integrated balances will be the subject of a second study to be released at a later date.

WILLIAM A. VOGELY
Assistant Director--
Mineral Resource Evaluation

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SUPPLY AND DEMAND FOR ENERGY IN THE UNITED STATES BY STATES AND REGIONS, 1960 AND 1965

(In Four Parts)

3. Dry Natural Gas

by

Lulie H. Crump¹

ABSTRACT

U.S. supply and demand data for dry natural gas by source, form, and major consuming sectors--within and between States and defined regions--were tabulated for the years 1960 and 1965. State-by-State quantitative data are provided for the natural gas industry that can be arranged into regional groupings and used to determine regional flow patterns. The tables show the derivation of the total supply of gas available for consumption from total marketed production. The tables also report the distribution of the supply among the major consuming sectors (household and commercial, industrial, transportation, and electricity generation, utilities). The summarized data show an increase in the absolute demand for natural gas in all regions for the period 1960-65, although the relative positions of the various subregions, with respect to national consumption, remained about the same. To enable comparison of data on dry natural gas with data on other energy sources, quantities in terms of million cubic feet were converted to British thermal unit (Btu) equivalents.

INTRODUCTION

Construction of State and regional energy balances and flows by major sources of energy, including natural gas, requires data on a State basis. Many of the available regional data for particular energy resources are arbitrarily divided into regional patterns particular to each energy industry. The primary purpose of this study is to provide estimated State-by-State supply and demand balances, including interstate shipments, for natural gas, by source, form, and consuming sectors. Construction of these State natural gas balances makes it possible to construct regional balances and to establish regional flow patterns for natural gas. In determining the feasibility of doing such an analysis for natural gas annually, the years 1960 and 1965 were selected for a pilot study.

Data for 1960 and 1965 have been presented in tabular form as supply-demand balances, showing the development of the total supply available for consumption and the disposition of that supply-demand by consuming sector--

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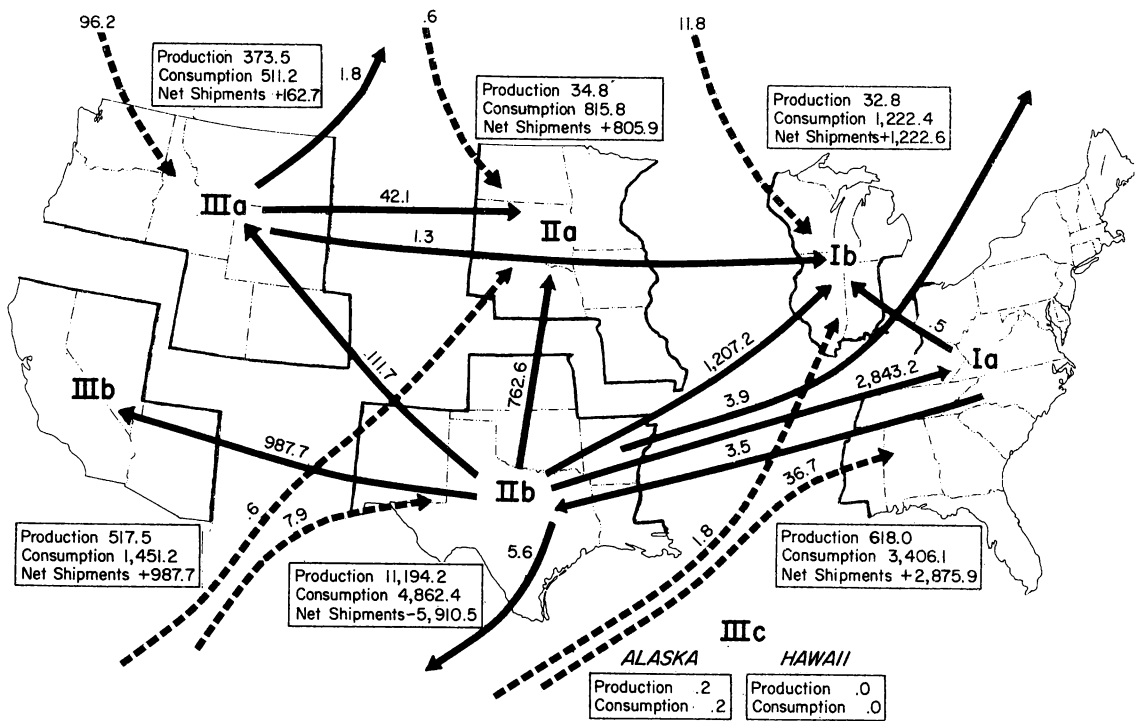


FIGURE 1. - Flow Pattern for Natural Gas by Regions—1960¹ (Billion Cubic Feet).

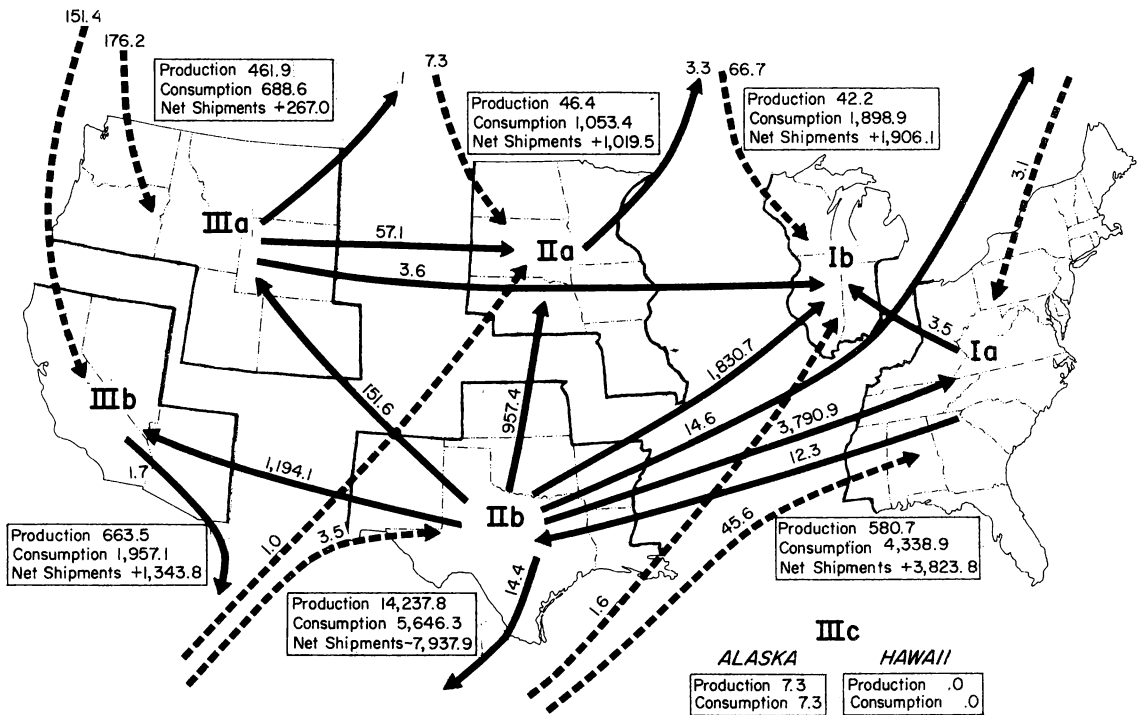


FIGURE 2. - Flow Pattern for Natural Gas by Regions—1965¹ (Billion Cubic Feet).

¹Detail of loss, storage, and extraction loss not shown on figures.

for each State and region. Problems encountered and methodology used for the preparation of the natural gas supply and demand balances, and the regional flow patterns featured in figures 1 and 2 are analyzed.

NATURAL GAS STATISTICS

The Bureau of Mines is the chief source of the annual data for natural gas used in this study. The Bureau compiles and publishes a detailed quarterly and annual statistical series on natural gas that has proved to be most adaptable to the State and regional format of this study. State data are collected by the Bureau on natural gas production and consumption by major demand sectors through annual surveys of oil and gas producers, natural gas processing plants, gas pipeline companies, and gas utility companies. Separate reports are obtained from respondents for each State in which they operate. This information is published annually in the natural gas chapter of the Minerals Yearbook.

However, data on individual State gas shipments were discontinued in the 1966 yearbook. Net interstate gas shipments, by State and region, were presented in table 1 of the Bureau of Mines Mineral Industry Survey, Natural Gas Production and Consumption, 1966. These data do not show receipts of gas for each State by producing regions.

METHODOLOGY

Regions and States

In preparing this study, the United States was arbitrarily divided into three energy regions:

Region I Eastern United States:

Subregion Ia:

Maine	Pennsylvania
New Hampshire	Delaware
Vermont	Maryland
Massachusetts	District of Columbia
Rhode Island	Virginia
Connecticut	West Virginia
New York	North Carolina
New Jersey	South Carolina

Subregion Ib:

Georgia	Indiana
Florida	Illinois
Kentucky	Michigan
Tennessee	Wisconsin
Alabama	
Mississippi	
Ohio	

Region II Central United States:

Subregion IIa:

Minnesota
Iowa
Missouri
North Dakota
South Dakota
Nebraska

Subregion IIb:

Arkansas
Louisiana
Oklahoma
Texas
New Mexico
Kansas

Region III Western United States:

Subregion IIIa:

Montana
Idaho
Wyoming
Utah
Colorado
Washington
Oregon

Subregion IIIb:

Arizona
Nevada
California

Subregion IIIc:

Alaska
Hawaii

Conversions

A standard conversion factor of 1,035 British thermal units (Btu) per cubic foot of dry natural gas was used to convert gas volumes in the supply-demand balances for 1960 and 1965, with the exception of the volumes in the marketed production column, which is wet gas. Wet gas contains the energy value of the natural gas liquids not yet extracted. Dry natural gas volumes exclude extraction loss, which is the equivalent of the gas volume shrinkage from the extraction of natural liquids from wet gas. The volume of marketed production wet gas minus the volume of extraction loss multiplied by 1,035 Btu equals the Btu value of dry gas. The total Btu value of the extraction loss is derived from the combined Btu values of the natural gas liquids produced as follows:²

Liquefied petroleum (LP) gases and ethane	x	95,000 Btu per gallon	+	All other products	x	110,000 Btu per gallon	=	Total natural gas liquids Btu value (in thousand Btu)
---	---	-----------------------------	---	--------------------------	---	------------------------------	---	--

Gas volumes for 1960 are converted to a pressure base of 14.65 pounds per square inch absolute (psia) at 60° F; for 1965, 14.73 psia is used. The change in pressure base was adopted in 1965 in response to the Bureau of the Budget's request to establish uniformity in reporting between Federal and industry gas statistics. Adjustments in pressure base were not considered to be of statistical significance in this study.

Supply

Marketed Production

Natural gas production data were obtained directly from the natural gas chapters of the Bureau of Mines Minerals Yearbook. Marketed production comprises wet gas sold or consumed by producers, including losses due to natural gas liquids recovery, transmission, quantities added to storage, and gas fill in pipelines.

²Harper, William B., and Leonard L. Fanelli. Natural Gas Liquids. BuMines Minerals Yearbook 1965, v. II, 1967, pp. 321-347.

Shipments

Shipments "in" (quantity received) and shipments "out" (quantity shipped), reported by State in the natural gas chapters of the Minerals Yearbook,³ are computed by use of pipeline company data. Net shipments shown in tables 1 and 2 of this report are the difference between the "in" and "out" data.

Foreign Trade

Foreign imports, shown by State of consumption in the yearbook tables, have been calculated by energy subregions for purposes of this study. Exports to Canada and New Mexico, reported in the yearbook tables by Census regions, were allotted to the appropriate energy subregions by realining reported exports from Census regions to fit the energy subregions. Only subregional and regional foreign trade figures are shown in tables 1 and 2, and these amounts are already included in the interstate natural gas shipments figures.

Extraction Loss

Extraction loss in tables 1 and 2 represents the natural gas component and the Btu equivalents of natural gas liquids extracted from wet gas. Data on extraction loss for 1965 are taken from the natural gas liquids chapter of the Minerals Yearbook.⁴ The extraction loss for 1960, however, had to be estimated; since the actual volume of gas lost in the extraction of natural gas liquids from natural gas in 1960 was not tabulated, a standard loss of 36 cubic feet per gallon of liquids produced was assumed. Using the total natural gas liquids figures given in the 1960 natural gas liquids chapter of the Minerals Yearbook,⁵ and multiplying each of the State figures shown therein by the standard loss of 36 cubic feet per gallon of liquids produced, gives rise to the figures (with some minor adjustments) appearing in the "extraction loss, transfers out" column of table 1 of this report. This procedure, using the State of Arkansas, is as follows:

Total natural gas liquids (thousand gallons)	x	Standard loss per gallon (cubic feet)	=	Extraction loss, transfers out (million cubic feet)
107,810	x	36	=	3,888.0

In the tables, extraction loss is subtracted from natural gas supply. The energy value of natural gas liquids is shown as transferred "in" in the supply and demand balances for petroleum and natural gas liquids, in the forthcoming study on petroleum and natural gas liquids by State and region in 1960

³Avery, Ivan F., and Lulie V. Harvey. Natural Gas. BuMines Minerals Yearbook 1960, v. II, 1961, table 8, pp. 323-324.

Zaffarano, Richard F., and Leonard L. Fanelli. Natural Gas. BuMines Minerals Yearbook 1965, v. II, 1967, table 3, pp. 296-298.

⁴Table 5, p. 330, of work cited in footnote 2.

⁵Avery, I. F., W. G. Messner, B. D. Furgang, and E. R. Eliff. Natural Gas Liquids. BuMines Minerals Yearbook 1960, v. II, 1961, table 3, p. 341.

and 1965. This transfer, to another energy source, avoids duplication of natural gas liquids consumption in the calculation of overall energy balances.

Stock Change

Stock change in tables 1 and 2, representing net change in underground storage of natural gas, is obtained from the natural gas chapters of the Minerals Yearbook.⁶ For purposes of this study, a withdrawal from storage is regarded as adding to the supply of gas available for consumption, and additions to storage are considered to decrease the supply available for consumption.

Demand

In this study, total supply available for consumption, which is also equal to the total domestic demand, is obtained from marketed production, plus or minus net shipments, minus extraction loss, plus or minus stock changes (with withdrawals considered as plus, and additions considered as minus). Total domestic demand also is equal to the total of the various consumer sectors.

Household and Commercial

This sector represents the total residential and commercial use by States shown in the natural gas chapters of the Minerals Yearbook.⁷ The District of Columbia and Maryland figures are estimated breakdowns from the combined figures for total consumption for these States.

Industrial

Calculation of the industrial sector by States requires refinement of the data in the natural gas chapters of the Minerals Yearbook. From the reported net industrial demand in the natural gas chapters,⁸ the following equation was used to obtain gross industrial demand as shown in tables 1 and 2:

⁶Table 5, p. 321, of the first work cited in footnote 3.

Table 8, p. 307, of the second work cited in footnote 3.

⁷Table 11, pp. 328-329, of the first work cited in footnote 3.

Table 4, pp. 300-301, of the second work cited in footnote 3.

⁸Table 12, pp. 332-333, of the first work cited in footnote 3.

Table 4, pp. 300-301, of the second work cited in footnote 3.

Table 8, pp. 323-324, of the first work cited in footnote 3.

Second work cited in footnote 3.

Subregion	Percent	
	1960	1965
Ia.....	4.7	3.6
Ib.....	0.3	0.3
IIa.....	0.3	0.3
IIb.....	87.7	88.8
IIIa.....	2.9	2.9
IIIb.....	4.1	4.1
IIIc.....	Negligible	Negligible
Total.....	100.0	100.0

The absolute demand for natural gas increased in all regions and subregions between 1960 and 1965; however, the relative positions of the various subregions with respect to national consumption remained about the same. The exception is the surplus Subregion IIb, which accounted for about 3 percent less of national consumption in 1965 than in 1960. Subregions Ib and IIIb had an increase in consumption of almost 2 percent and 1 percent, respectively, as shown in the following tabulation:

Subregion	Percent	
	1960	1965
Ia.....	27.8	27.8
Ib.....	10.0	12.2
IIa.....	6.6	6.8
IIb.....	39.6	36.2
IIIa.....	4.2	4.4
IIIb.....	11.8	12.6
IIIc.....	Negligible	Negligible
Total.....	100.0	100.0

Subregion Ia accounted for approximately 48 percent of surplus shipments of gas from the major exporting Subregion IIb in 1960 and 1965. Subregion Ib, however, increased its receipts of IIb shipments from 20.4 percent in 1960 to 23.1 percent in 1965, as follows:

Subregion	Percent	
	1960	1965
Ia.....	48.1	47.8
Ib.....	20.4	23.1
IIa.....	12.9	12.1
IIIa.....	1.9	1.9
IIIb.....	16.7	15.0
IIIc.....	-	-
Mexico.....	-	0.1
Total.....	100.0	100.0

TABLE 1. - Supply and demand for natural gas by States and regions--1960

(Million cubic feet at 14.65 psia)

Regions and States	Marketed production		Shipments						Supply						Extraction loss, transfers out		Stock change: withdrawals (+) additions (-)		Total supply available for consumption		Household and commercial		Industrial		Transportation		Electricity generation, utilities		Total domestic demand					
			In		Out		Net		Imports		Exports		Net								Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu						
	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu										
United States total.....	12,771,038.0	14,134.7	7,532,918.0	7,796.6	-7,388,604.0	-7,647.2	+144,314.0	+149.4	(155,646.0)	(161.1)	(-11,332.0)	(-11.7)	(+144,314.0)	(+149.4)	-514,317.0	-1,449.1	-131,694.0	-136.3	12,269,341.0	12,698.7	4,123,389.0	4,267.7	6,074,114.0	6,286.7	347,075.0	359.2	1,724,763.0	1,785.1	12,269,341.0	12,698.7				
Region I:																																		
Subregion Ia:																																		
Maine.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
New Hampshire.....	-	-	2,889.0	3.0	-	-	+2,889.0	+3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	2,889.0	3.0	-	-	-	-	-	-	-	-	-		
Vermont.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Massachusetts.....	-	-	80,026.0	82.8	-	-	+80,026.0	+82.8	-	-	-	-	-	-	-	-	-	-	-	-	-	80,026.0	82.8	55,253.0	57.2	13,714.0	14.1	274.0	0.3	10,785.0	11.2	80,026.0	82.8	
Rhode Island.....	-	-	11,707.0	12.1	-	-	+11,707.0	+12.1	-	-	-	-	-	-	-	-	-	-	-	-	-	11,707.0	12.1	8,405.0	8.7	2,736.0	2.8	222.0	0.2	344.0	0.4	11,707.0	12.1	
Connecticut.....	-	-	29,590.0	30.6	-	-	+29,590.0	+30.6	-	-	-	-	-	-	-	-	-	-	-	-	-	29,590.0	30.6	19,190.0	19.9	8,422.0	8.7	222.0	0.2	1,756.0	1.8	29,590.0	30.6	
New York.....	4,990.0	5.2	424,243.0	439.1	-463.0	-0.5	+423,780.0	+438.6	-	-	-	-	-	-	-	-	-	-	-	-	-	424,243.0	439.1	287,609.0	297.7	86,551.0	89.8	2,285.0	2.4	57,819.0	59.6	424,243.0	439.1	
New Jersey.....	-	-	150,276.0	155.6	-	-	+150,276.0	+155.6	-	-	-	-	-	-	-	-	-	-	-	-	-	150,276.0	155.6	85,448.0	88.4	38,768.0	40.2	578.0	0.6	25,482.0	26.4	150,276.0	155.6	
Pennsylvania.....	113,928.0	118.1	498,607.0	516.1	-55,962.0	-57.9	+442,645.0	+458.2	-	-	-	-	-	-	-108.0	-0.3	-28,363.0	-29.4	-	-	-	498,607.0	516.1	288,180.0	298.3	218,826.0	226.5	15,109.0	15.6	5,987.0	6.2	528,102.0	546.6	
Delaware.....	-	-	9,511.0	9.9	-	-	+9,511.0	+9.9	-	-	-	-	-	-	-	-	-341.0	-0.4	-	-	-	9,511.0	9.9	4,378.0	4.5	1,602.0	1.7	-	-	3,190.0	3.3	9,511.0	9.9	
Maryland.....	4,065.0	4.3	64,685.0	66.9	-1,528.0	-1.6	+63,157.0	+65.3	-	-	-	-	-	-	-	-	-	-	-	-	-	64,685.0	66.9	48,172.0	49.9	18,113.0	18.0	859.0	0.9	78.0	0.8	67,222.0	69.6	
District of Columbia.....	-	-	19,370.0	20.0	-	-	+19,370.0	+20.0	-	-	-	-	-	-	-	-	-	-	-	-	-	19,370.0	20.0	18,070.0	18.7	1,300.0	1.3	-	-	-	-	19,370.0	20.0	
Virginia.....	2,227.0	2.3	69,682.0	72.1	-2,220.0	-2.3	+67,462.0	+69.8	-	-	-	-	-	-	-	-	-19.0	Neg.	-	-	-	69,682.0	72.1	38,245.0	39.6	26,050.0	26.9	3,935.0	4.1	1,438.0	1.5	69,670.0	72.1	
West Virginia.....	208,757.0	237.0	153,725.0	159.1	-158,271.0	-163.8	+4,546.0	+4.7	-	-	-	-	-	-	-12,708.0	-34.1	-25,148.0	-26.0	-	-	-	208,757.0	237.0	166,355.0	172.2	65,203.0	67.5	91,771.0	95.0	8,440.0	8.7	166,355.0	172.2	
North Carolina.....	-	-	47,376.0	49.0	-	-	+47,376.0	+49.0	-	-	-	-	-	-	-	-	-	-	-	-	-	47,376.0	49.0	12,264.0	12.7	28,014.0	29.0	2,438.0	2.5	4,660.0	4.8	47,376.0	49.0	
South Carolina.....	-	-	60,568.0	62.7	-	-	+60,568.0	+62.7	-	-	-	-	-	-	-	-	-	-	-	-	-	60,568.0	62.7	11,508.0	11.9	24,561.0	25.5	1,221.0	1.3	23,278.0	24.0	60,568.0	62.7	
Georgia.....	-	-	185,961.0	192.5	-	-	+185,961.0	+192.5	-	-	-	-	-	-	-	-	-	-	-	-	-	185,961.0	192.5	77,239.0	79.9	79,840.0	82.8	3,545.0	3.7	25,337.0	26.1	185,961.0	192.5	
Florida.....	30.0	Neg.	139,524.0	144.4	-	-	+139,524.0	+144.4	-	-	-	-	-	-	-	-	-	-	-	-	-	139,524.0	144.4	13,359.0	13.8	36,677.0	38.3	1,000.0	1.0	88,518.0	91.3	139,524.0	144.4	
Kentucky.....	75,329.0	93.3	139,207.0	144.1	-50,576.0	-52.3	+88,631.0	+91.8	-	-	-	-	-	-	-9,284.0	-25.0	+1,133.0	+1.2	-	-	-	139,207.0	144.1	81,273.0	84.1	53,316.0	55.2	18,932.0	19.6	2,288.0	2.4	139,207.0	144.1	
Tennessee.....	63.0	0.1	159,869.0	165.4	-	-	+159,869.0	+165.4	-	-	-	-	-	-	-	-	-	-	-	-	-	159,869.0	165.4	58,122.0	60.1	89,244.0	92.4	5,341.0	5.5	7,225.0	7.5	159,869.0	165.4	
Alabama.....	57.0	0.1	186,119.0	192.6	-165.0	-0.2	+185,954.0	+192.4	-	-	-	-	-	-	-	-	-	-	-	-	-	186,119.0	192.6	58,322.0	60.4	110,711.0	114.5	7,600.0	7.9	9,378.0	9.7	186,011.0	192.5	
Mississippi.....	172,478.0	180.8	176,741.0	183.0	-156,288.0	-161.8	+20,453.0	+21.2	-	-	-	-	-	-	-1,224.0	-3.6	+534.0	+0.6	-	-	-	176,741.0	183.0	39,200.0	40.6	87,298.0	90.5	31,385.0	32.5	34,358.0	35.4	192,241.0	199.0	
Ohio.....	36,074.0	37.3	691,833.0	716.1	-115.0	-0.1	+691,718.0	+716.0	-	-	-	-	-	-	-	-	-17,776.0	-18.4	-	-	-	691,833.0	716.1	469,754.0	486.2	228,172.0	236.2	9,098.0	9.4	2,992.0	3.1	710,016.0	734.9	
Subtotal Ia.....	617,998.0	678.5	3,301,509.0	3,417.1	-425,588.0	-440.5	+2,875,921.0	+2,976.6	(36,692.0)	(38.0)	(-)	(-)	(+36,692.0)	(+38.0)	-23,324.0	-63.0	-64,486.0	-66.7	3,406,109.0	3,525.4	1,741,387.0	1,802.4	1,246,384.0	1,290.1	112,484.0	116.4	305,854.0	316.5	3,406,109.0	3,525.4				
Subregion Ib:																																		
Indiana.....	342.0	0.4	218,305.0	226.0	-234.0	-0.2	+218,071.0	+225.8	-	-	-	-	-	-	-	-	-2,033.0	-2.2	216,380.0	224.0	96,045.0	99.4	106,543.0	110.3	5,002.0	5.2	8,790.0	9.1	216,380.0	224.0				
Illinois.....	11,666.0	34.1	537,768.0	556.6	-523.0	-0.6	+537,245.0	+556.0	-	-	-	-	-	-	-13,495.0	-36.0	-5,663.0	-5.8	529,753.0	548.3	279,370.0	289.1	197,967.0	205.0	10,068.0	10.4	42,348.0	43.8	529,753.0	548.3				
Michigan.....	20,790.0	22.0	371,540.0	384.6	-	-	+371,540.0	+384.6	-	-	-	-	-	-	-328.0	-0.9	-11,541.0	-12.0	380,461.0	393.7	244,978.0	253.6	127,673.0	132.0	2,601.0	2.7	5,209.0	5.4	380,461.0	393.7				
Wisconsin.....	-	-	95,768.0	99.1	-	-	+95,768.0	+99.1	-	-	-	-	-	-	-	-	-	-	95,768.0	99.1	58,300.0	60.3	34,860.0	36.1	540.0	0.6	2,068.0	2.1	95,768.0	99.1				
Subtotal Ib.....	32,798.0	56.5	1,223,381.0	1,266.3	-757.0	-0.8	+1,222,624.0	+1,265.5	(13,602.0)	(14.1)	(-)	(-)	(13,602.0)	(14.1)	-13,823.0	-36.9	-19,237.0	-20.0	1,222,362.0	1,265.1	678,693.0	702.4	467,043.0	483.4	18,211.0	18.9	58,415.0	60.4	1,222,362.0	1,265.1				
Total region I.....	650,796.0	735.0	4,524,890.0	4,683.4	-426,345.0	-441.3	+4,098,545.0	+4,242.1	(50,294.0)	(52.1)	(-)	(-)	(50,294.0)	(52.1)	-37,147.0	-99.9	-83,723.0	-86.7	4,628,471.0	4,790.5	2,420,080.0	2,504.8	1,713,427.0	1,773.5	130,695.0	135.3	364,269.0	376.9	4,628,471.0	4,790.5				
Region II:																																		
Subregion IIa:																																		
Minnesota.....	-	-	179,625.0	185.9	-	-	+179,625.0	+185.9	-	-	-	-	-	-	-	-	-	-	179,625.0	185.9	81,751.0	84.6	49,049.0	50.8	304.0	0.3	48,521.0	50.2	179,625.0	185.9				
Iowa.....	-	-	211,129.0	218.5	-	-	+211,129.0	+218.5	-	-	-	-	-	-	-	-	-18,929.0	-19.6	192,200.0	198.9	86,293.0	89.3	48,399.0	50.1	8,921.0									

This item includes 2 pieces in pocket.
Borrowers are responsible for the return of
all such pieces along with the main item.

lion
ic fe

+422,28

-
+4,25
-
+115,26
+16,82
+41,93
-0.3 +560,42
+221,53
6.5 +562,29
+18,52
+97,00

+21,96
+96,50
-24,43

+78,41

89,89
17,12
0,80
,80
04
05
46
5

