# GUAM CONSUMER PRICE INDEX

**Cost of Living Section** 

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### **DEFINITION OF THE CONSUMER PRICE INDEX**

The CONSUMER PRICE INDEX (CPI) is a measure of the average change in prices over time of goods and services purchased by households, both families and single person living alone. The Guam 2008 CPI is based on the concept of a representative "market basket", a sample of all goods and services that consumers purchase, as determined by the 2005 Household Income and Expenditure Survey (HIES) funded by the U.S. Dept. of Interior to the U.S. Census Bureau, and a similar in design with the U.S. CPI.

The CPI is measured from a total of 168 items from 8 major groups, and indices are computed at two different levels of aggregation. More than 1,060 price quotations are collected during the middle month of each quarter either by phone or on-site survey by qualified price enumerators. There are approximately 200 business outlets included in the construction of the CPI, ranging from grocery, department and hardware stores to a variety of service establishments. This report provides average price changes for all items, groups, subgroups and special indexes from consecutive quarters to one year earlier. An annual average and annualized inflation rate are also reported. Indexes are subject to revision.

### **HOW TO INTERPRET INDEX CHANGES**

A price change can be expressed as a percentage change between two periods, as a difference in index points between a given period and a base period assigned an index of 100.0. Thus, an index of 110.7 for a given period means the price level has increase by 10.7% from the base period of 100.0. It does not mean a 10.7% change from the immediately preceding period as shown in example 1:

### Example I:

Period:	1st Qtr.	2nd Qtr.	3rd Qtr.
	(base period)		
Index:	100.0	108.4	110.7
	8.4% cha	ange2.1%	change
		10 7% change	

Any period, such as the 2nd Quarter in the next example, can be converted to a base period by dividing all indices individually by the periods' index, then multiplying the results by 100.

### Example II:

Period:	1st Qtr.	2nd Qtr.	3rd Qtr.
	(base period)		
Index:	100.0	108.4	110.7
Period:		2nd Qtr.	3rd Qtr.
		(base period)	
Index:		100.0	102.1
		2% ch	ange

In example II, we dealt with a change in price index from a given quarter to the quarter immediately succeeding it - a 2.1% change from the second to the third quarter. However, many economic statistics, such as personal income, government revenues, and expenditure, are reported on an annual basis. The equivalent annual rate is used to determine what the index would be if a price change during a three-month period continues at the same rate for four quarters, a twelve-month period. The annual rate is often used to achieve uniformity in statistical expression.

Thus, a quarterly change of 1.0% is equivalent to an annual rate of 4.1%. If prices were to increase 1.0% each quarter for four quarters, the annual increase would be 4.1%. Derivation of this figure is shown in the Example III.

### **Example III:**

$$P_n = P_o(1+i)^n$$
 where  $P_n = \text{equivalent annual rate}$ 

$$P_o = \text{base index (100.0)}$$

$$i = \text{current rate (1.0\%)}$$

$$n = \text{number of periods (4)}$$

$$Thus, 104.1 = 100.0 (1 + .01)^4$$

Please see www.bsp.guam.gov, for historical CPI data, and other state data resources.

### **GUAM CONSUMER PRICE INDEX**

GROUP	*GROUP WEIGHTS	NO. OF ITEMS ALLOCATED	
Food	15.60	69	
Housing	32.11	42	
Apparel & Upkeep	7.61	23	
Transportation	8.60	4	
Medical Care	20.42	5	
Recreation	2.97	5	
Education & Communicati	c 2.77	6	
Other Goods & Services	<u>9.92</u>	14	
	100.0	168	

<sup>\*</sup> Based on the 2005 Household Income and Expenditure Survey (HIES) results.

2. Base period: 4th Quarter 2007 = 100.0

### 3. Formula:

The index is computed by using base-weighted arithmetic average of prices. The formula used is either in the weighted aggregated form,

$$\int_{0i} piqo$$

$$\sum_{0i} poqo$$
x 100

or its equivalent, the weighted average of price relatives

$$\sum p_o q_o \left(\frac{P_i}{P_o}\right)$$

$$I_{oi} = \frac{100}{\sum p_{o}q_{o}}$$

where pl = the price of the commodity in the reporting period.

po = the price of the commodity in the base period, and

qo = the quantity of commodity sold in the base period.

# 4. Weights:

Based on the 2005 Household Income and Expenditure Survey (HIES)

TABLE A
CONSUMER PRICE INDEX
(1st Qtr. 2007 = 100.00)

GROUP	st Qtr. 200	CY 2025 QUARTERS						
	1st	2nd	3rd	4th	1st	2nd	3rd	4th
ALLITEMS	164.1	171.1	171.4	172.1	173.7			
FOOD	188.9	188.8	189.5	190.6	191.2			
HOUSING	143.9	146.1	146.1	147.6	147.9			
APPAREL & UPKEEP	92.4	91.9	90.2	91.4	91.6			
TRANSPORTATION	129.0	130.9	132.5	132.5	134.6			
MEDICAL CARE	236.6	267.9	267.9	267.9	273.8			
RECREATION	143.2	143.4	145.7	145.7	145.4			
EDUCATION & COMMUNICATION	122.8	123.2	123.3	124.2	124.5			
OTHER GOODS & SERVICES	145.1	142.2	142.3	142.3	142.7			
SPECIAL INDEXES								
ALL ITEMS LESS FOOD	159.6	167.8	168.1	168.6	170.5			
ENERGY 1	142.6	145.1	145.6	147.7	148.2			
ALL ITEMS LESS FOOD AND ENERGY	166.3	176.9	177.0	177.0	179.3			
COMMODITIES LESS FOOD	123.0	123.5	123.9	123.8	124.5			
SERVICES	188.9	203.4	203.5	204.6	207.2			
ALL ITEMS LESS HOSPITAL REL'D SVS	152.9	153.4	154.0	154.7	155.1			
Purchase Power of Consumer								
Dollar (3rd Qtr. 1996 = 100.00)	.41	.40	.40	.40	.39			
Dollar (4th Qtr. 2007 = 100.00)	.61	.58	.58	.58	.58			

TABLE B
CONSUMER PRICE INDEX
(1st Qtr. 2007 = 100.00)

GROUP	Relative	Index for 1st.	Index for 4th.	Index for 1st.	1st. Qt	ange to er. 2025 om
	Importance Qtr. CY 2024		Qtr. CY 2024	Qtr. CY 2025	Previous Quarter	One Year Earlier
All Items	100.00	164.1	172.1	173.7	1.0%	5.8%
All Items Less Food	84.41	159.6	168.6	170.5	1.1%	6.8%
Energy <sup>1</sup>	24.09	142.6	147.7	148.2	0.4%	3.9%
All Items Less Food and Energy	60.32	166.3	177.0	179.3	1.3%	7.8%
Commodities Less Food	37.54	123.0	123.8	124.5	0.6%	1.3%
Services	46.86	188.9	204.6	207.2	1.3%	9.7%
All Items Less Hospital Rel'd Svs*	90.62	152.9	154.7	155.1	0.3%	1.5%

		Index for	Index for	Index for		ange to tr. 2025	
GROUP	Relative Importance	1st. Qtr.	4th. Qtr.	1st. Qtr.	from		
		CY 2024	CY 2024	CY 2025	Previous Quarter	One Year Earlier	
Food	189.13	188.9	190.6	191.2	0.3%	1.2%	
Cereals and Cereal Products	210.07	205.8	192.8	192.8	0.0%	-6.3%	
Bakery Products	185.77	187.8	192.2	192.2	0.0%	2.4%	
Beef	213.69	216.5	232.2	236.9	2.0%	9.4%	
Pork	149.46	151.4	157.9	158.1	0.1%	4.4%	
Other Meats	253.00	253.4	255.2	255.2	0.0%	0.7%	
Poultry	168.43	170.8	167.0	167.4	0.3%	-2.0%	
Fish and Seafood	205.15	210.9	181.6	183.5	1.1%	-13.0%	
Eggs	238.88	236.0	301.6	285.3	-5.4%	20.9%	
Dairy Products	174.97	174.6	161.2	161.9	0.4%	-7.3%	
Fresh Fruits	162.93	163.7	179.0	179.1	0.0%	9.4%	
Fresh Vegetables	161.23	158.7	165.3	165.3	0.0%	4.2%	
Juice and Non-Alcoholic Drinks	176.13	174.8	173.4	173.4	0.0%	-0.8%	
Sugar and Sweets	201.26	200.7	217.9	217.9	0.0%	8.6%	
Fats and Oils	278.73	283.5	298.2	298.2	0.0%	5.2%	
Other Foods	198.37	196.5	206.0	206.3	0.1%	5.0%	
Meals Away from Home	182.42	182.4	188.6	191.4	1.5%	4.9%	
Alcoholic Beverages	155.78	155.7	163.7	163.7	0.0%	5.1%	

FOOTNOTE: "1" Index items selected by the Guam Energy Office

TABLE B (continued)

GROUP	Relative	Index for 1st. Qtr.	Index for 4th. Qtr.	Index for 1st. Qtr.	% Cha 1st. Qtı fro	. 2025
	Importance	CY	CY	CY	_	
		2024	2024	2025	Quarter	Earlier
TRANSPORTATION	8.6	129.0	132.5	134.6	1.6%	4.4%
New Cars	5.2	126.1	130.4	133.8	2.6%	6.1%
Motor Fuel	1.4	139.1	142.8	139.1	-2.6%	0.0%
Car Maintenance	1.0	143.3	146.2	146.2	0.0%	2.0%
Car Insurance	1.0	115.9	114.8	121.3	5.7%	4.7%

GROUP	Relative	Index for 1st. Qtr.	Index for 4th. Qtr.	Index for 1st. Qtr.	% Cha 1st. Qtr fro	. 2025
	Importance	CY CY	CY	Previous	One Year	
		2024	2024	2025	Quarter	Earlier
MEDICAL CARE	20.42	236.6	267.9	273.8	2.2%	15.7%
Prescription Drugs	0.67	183.5	197.9	197.9	0.0%	7.9%
Physician Services	2.07	214.3	214.3	214.3	0.0%	0.0%
Other Medical Practitioner Costs	0.47	156.8	156.8	156.8	0.0%	0.0%
Hospital and Related Services	17.22	243.5	280.1	287.0	2.5%	17.9%

		Index for	Index for	Index for	% Cha 1st. Qtı	_
GROUP	Relative Importance	1st. Qtr.	4th. Qtr.	1st. Qtr.	from	
	importance	CY	CY	CY	Previous	One Year
		2024	2024	2025	Quarter	Earlier
RECREATION	2.97	143.2	145.7	145.4	-0.2%	1.5%
Audio and Video	2.63	139.5	141.8	141.2	-0.4%	1.3%
Pet and Pet Products	0.19	210.8	216.2	219.5	1.5%	4.1%
Sporting Goods	0.14	121.0	121.0	121.0	0.0%	0.0%

TABLE B (continued)

GROUP	Relative	Index for 1st. Qtr.	Index for 4th. Qtr.	Index for 1st. Qtr.	% Chai 1st. Qtr fro	. 2025
	Importance	CY	CY	CY	_	
		2024	2024	2025	Quarter	Earlier
TRANSPORTATION	8.6	129.0	132.5	132.5	0.0%	2.7%
New Cars	5.2	126.1	130.4	133.8	2.6%	6.1%
Motor Fuel	1.4	139.1	142.8	139.1	-2.6%	0.0%
Car Maintenance	1.0	143.3	146.2	146.2	0.0%	2.0%
Car Insurance	1.0	115.9	114.8	117.8	2.6%	1.6%

GROUP	Relative	Index for 1st. Qtr.	Index for 4th. Qtr.	Index for 1st. Qtr.	% Chai 1st. Qtr fro	. 2025
	Importance	•	CY	CY	Previous	One Year
		2024	2024	2025	Quarter	Earlier
MEDICAL CARE	20.42	236.6	267.9	267.9	0.0%	13.2%
Prescription Drugs	0.67	183.5	197.9	197.9	0.0%	7.9%
Physician Services	2.07	214.3	214.3	214.3	0.0%	0.0%
Other Medical Practitioner Costs	0.47	156.8	156.8	156.8	0.0%	0.0%
Hospital and Related Services	17.22	243.5	280.1	280.1	0.0%	15.0%

		Index for	Index for	Index for	% Change to 1st. Qtr. 2025		
GROUP	Relative Importance	1st. 4th. Qtr. Qtr.	1st. Qtr.	from			
	importance	CY			Previous	One Year	
		2024	2024	2025	Quarter	Earlier	
RECREATION	2.97	143.2	145.7	145.7	0.0%	1.7%	
Audio and Video	2.63	139.5	141.8	141.2	-0.4%	1.3%	
Pet and Pet Products	0.19	210.8	216.2	219.5	1.5%	4.1%	
Sporting Goods	0.14	121.0	121.0	121.0	0.0%	0.0%	

TABLE B (continued)

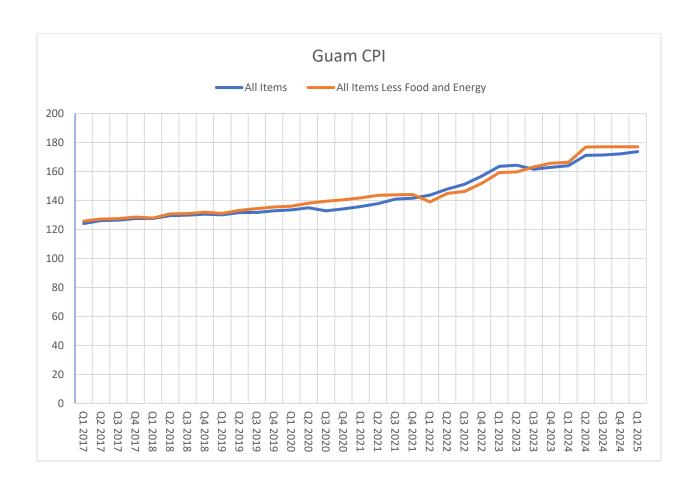
	Relative Importance	Index for 1st. Qtr. CY	Index for 4th. Qtr. CY	Index for 1st. Qtr. CY	% Change to 1st. Qtr. 2025 from	
GROUP						
					Previous	One Year
		2024	2024	2025	Quarter	Earlier
HOUSING	32.11	143.9	147.6	147.9	0.2%	2.8%
Rent and Lodging	5.13	133.2	133.9	133.9	0.0%	0.5%
Home Fuel	3.22	143.2	144.1	144.1	0.0%	0.6%
Electricity	8.09	167.8	167.8	167.8	0.0%	0.0%
Water, Sewer and Trash	3.37	167.6	181.9	182.2	0.1%	8.7%
Floor Coverings	0.17	145.6	146.0	150.2	2.9%	3.2%
Furniture and Bedding	0.75	60.7	60.3	62.2	3.2%	2.5%
Appliances	0.93	76.2	75.6	75.8	0.2%	-0.6%
Tools, Hardware, Outdoor Equip.	0.91	138.1	133.8	133.9	0.0%	-3.1%
Housekeeping Supplies	7.95	141.3	144.5	145.4	0.6%	2.9%
Housekeeping Operations	1.58	128.8	130.7	130.7	0.0%	1.5%

GROUP	Relative Importance	Index for 1st. Qtr. CY 2024	Index for 4th. Qtr. CY 2024	Index for 1st. Qtr. CY 2025	% Change to 1st. Qtr. 2025 from	
					APPAREL & UPKEEP	7.61
Men's Apparel	2.09	94.7	98.1	98.1	0.0%	3.6%
Boy's Apparel	0.54	108.1	108.1	108.1	0.0%	0.0%
Women's Apparel	2.03	112.6	112.0	112.0	0.0%	-0.5%
Girl's Apparel	0.33	73.6	70.5	70.5	0.0%	-4.2%
Footwear	1.37	38.5	38.5	38.5	0.0%	-0.1%
Infant's & Toddler's Apparel	0.38	142.6	133.8	137.1	2.5%	-3.8%
Jewelry	0.87	89.7	89.7	89.7	0.0%	0.0%

TABLE C
CONSUMER PRICE INDEX (CPI)
(1st Qtr. 2007 = 100.00)

## Rebased Indexes<sup>2</sup>, Average Annual Percent Change

		asca mackes , A				Average
Calendar Year	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Annual Average	Annual Percent Change
2005	79.3	80.9	81.5	88.1	82.5	7.7%
2006	88.8	91.3	92.4	95.5	92.0	11.6%
2007	97.2	98.1	97.6	100.0	98.2	6.8%
2008	101.1	104.1	106.0	106.1	104.3	6.2%
2009	105.6	105.4	106.9	106.5	106.1	1.7%
2010	107.8	108.9	109.4	110.6	109.2	2.9%
2011	109.8	112.9	113.3	115.0	112.8	3.3%
2012	116.0	116.4	116.6	116.3	116.3	3.2%
2013	116.8	117.0	115.5	115.8	116.3	0.0%
2014	116.4	117.1	117.2	117.9	117.2	0.8%
2015	116.0	116.5	116.4	115.4	116.1	-0.9%
2016	121.3	123.5	123.6	123.6	123.0	6.0%
2017	124.1	126.1	126.4	127.6	126.1	2.5%
2018	127.6	129.3	129.9	130.5	129.3	2.6%
2019	130.1	131.6	131.8	132.9	131.6	1.8%
2020	133.5	134.9	132.9	134.2	133.9	1.7%
2021	135.8	137.8	140.9	141.3	139.0	3.8%
2022	143.7	147.9	151.1	156.8	149.9	7.9%
2023	163.6	164.3	161.1	162.6	162.9	8.7%
2024	164.0	171.1	171.4	172.1	169.6	4.1%
2025	173.7				173.7	2.4%





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