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14. Rate Regulation of Public Utility

公共料金規制

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Definition of the Public Utilities

Industries in the Public interest

Electric Power

Gas

Water supply

Telecommunication

Broadcasting

Postal Service

Transport



Public Utility

- 1) The most basic infrastructure
- 2) Affect many kinds of business & social activities
- 3) Provide daily necessities for general consumers



Weight of Public Charge(Fee)

	1975	1990	2000
House rent	19	53	27
Electricity	191	240	294
Gas	93	93	88
Water	49	85	100
Railway	137	230	154
Bus	45	36	29
Taxi	44	33	24
Airline	11	27	26
Highway	8	26	44
Telephone	183	190	180
Mobile	----	----	74
Postal	15	14	15
CPI Total	10,000	10,000	10,000



Degree of National Interest

Electricity	74.5(%)
Telephone	42.8
Water	39.3
rice	21.4
Railway	21.0
Gas	15.4
Car Insurance	14.7

Postal	14.1(%)
Broadcasting(NHK)	12.7
Highway	12.5
School tuition	9.9
Bus	9.5
Taxi	6.7
Airline	3.0

Major Regulation in Public Utility

Public Utility	Regulator	Entry Regulation	Price Regulation
Electric Power	METI(ANRE)	generation,free distribution,permission	approval,but generally free for large consumers
Gas	METI(ANRE)	permission,but generally free for large consumers	approval,but generally free for large consumers
Water	MHLW	approval	approval for local government
Postal Services	MPMHAPT	permission	legally determined
Letters			
Cards			
Telephone	MPMHAPT	permission & register	approval
Local			
Long distance			
Broadcasting	MPMHAPT	license	legally determined
Railways	MLIT	license	approval
Express			
Regular			
Air (Domestic)	MLIT	license	report
Subways	MLIT	license	approval
Buses	MLIT	license	approval
METI:Ministry of Economy,Trade and Industry			
MHLW:Ministry of Health,Labor and Welfare			
MLIT:Ministry of Land,Infrastructure and Transport			
MPMHAPT:Ministry of Public Management,Home Affairs,Post and Telecommunication			



Background of Regulatory Reform

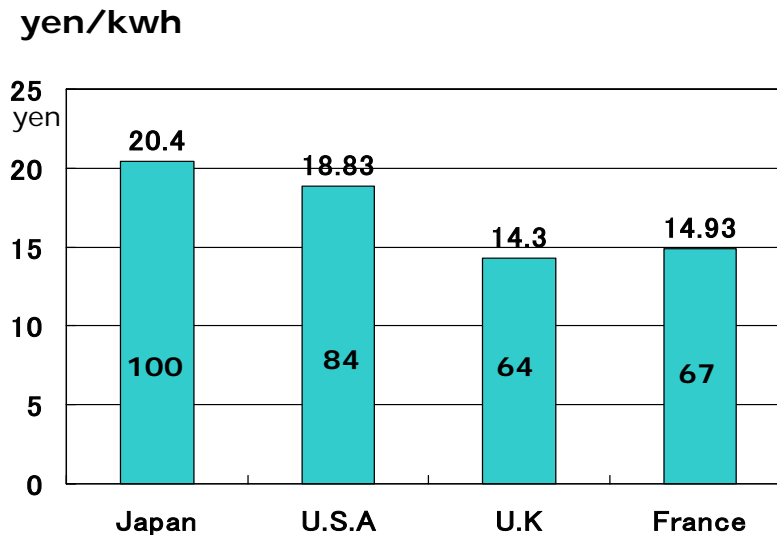
Lack of Competition
No Incentive to Lower Operating Cost



High Cost , High Price Structure
Inefficiency

Major Reason of the Deregulation of Japanese Electric Industry

Comparison by exchange rate



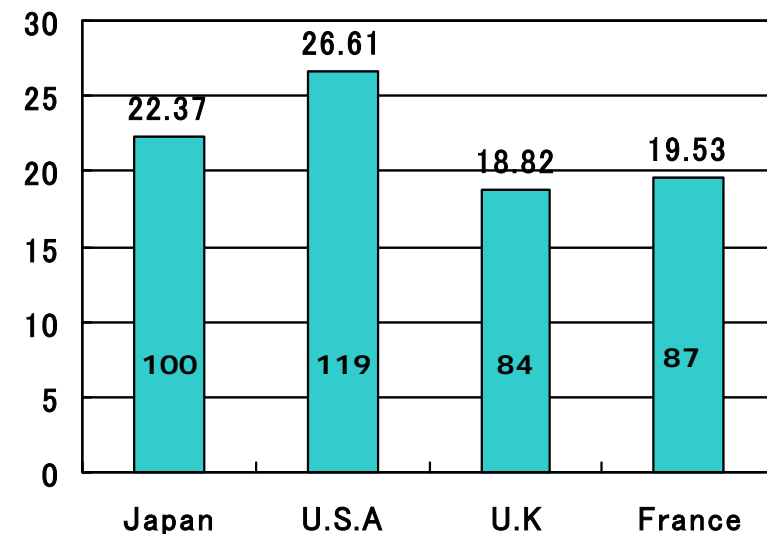
Household(280kwh/month)

1 US\$=113.91 yen

1 L =216.83 yen

1 FFr = 22.19 yen

Comparison by purchasing power parity



Household(280kwh/month)

1 US\$= 161 yen

1 stg L= 242.47 yen

1 FFr = 24.21 yen



Deregulation of Public Utilities

- 1) Promoting Competition
 - Entry Deregulation
 - Maintain Fair Competition
- 2) Privatization
- 3) Reconsideration of the Rate-Making Method
 - Incentive Price Regulation
- 4) Disclosure and Public Accountability



Purpose of Price Regulation

- 1) Efficiency of resource allocation
- 2) Fairness of Supply, Burden—
Universal Service
- 3) Security of Supply

International Comparison

Public Utility	Japan	U.S.A	U.K	France	Germany
Electric Power	100	94	55	46	68
Gas	100	47	27	43	47
Water	100	44	90	66	171
Postal Services					
Letters	100	52	59	56	76
Cards	100	51	95	89	111
Telephone					
Local	100	243	260	225	113
Long distance	100	76	129	157	101
Railways					
Express	100	246	125	44	96
Regular	100	70	253	110	127
Air (Domestic)	100	190	130	179	125
Subways	100	115	165	88	77
Buses	100	92	88	71	62



Price Regulation

- Rate of Return (ROR) Regulation
- Incentive Regulation
 - Price Cap
 - Yardstick

ROR Regulation

**Full Cost=Reasonable Costs
+ Reasonable Return**



Business Assets × ROR



ROR Regulation (1)

Merit

- 1) Incentive for long-term capital investment
- 2) Basis for computing charges is relatively easy to understand
- 3) Secure ROR



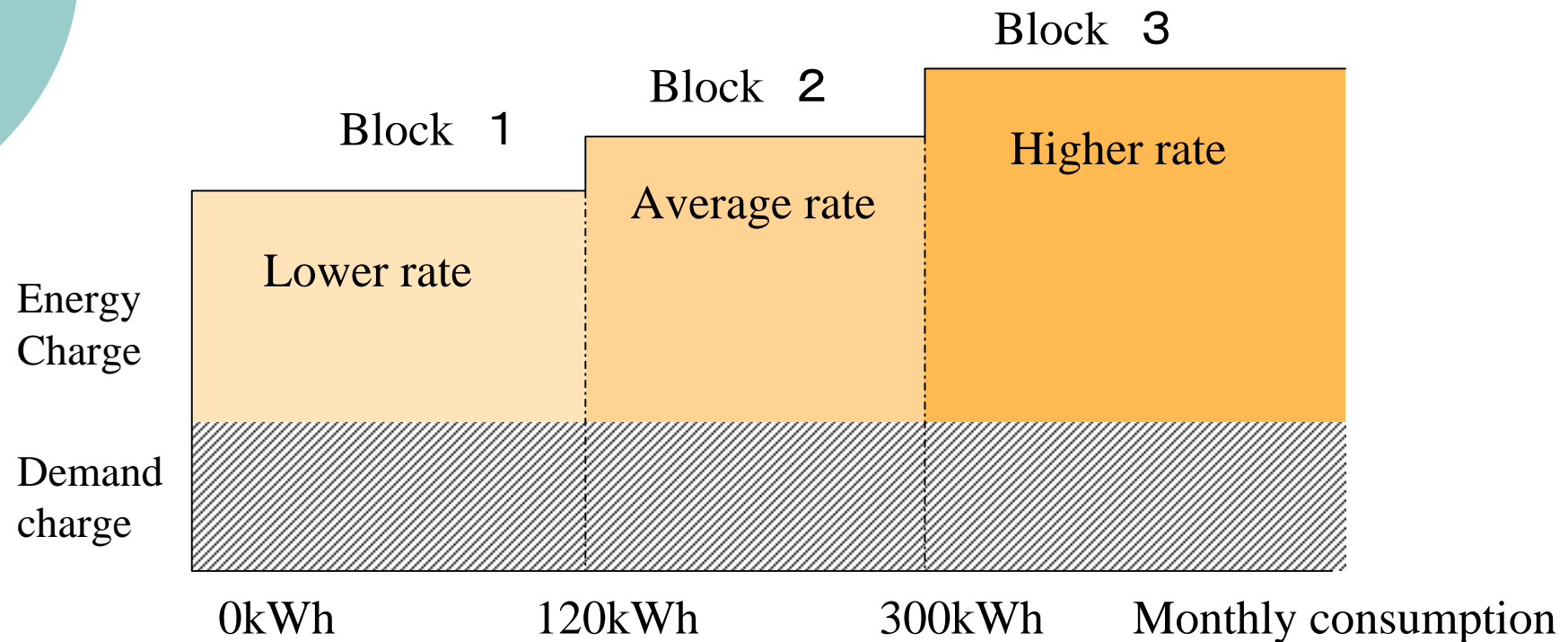
ROR Regulation (2)

Demerit

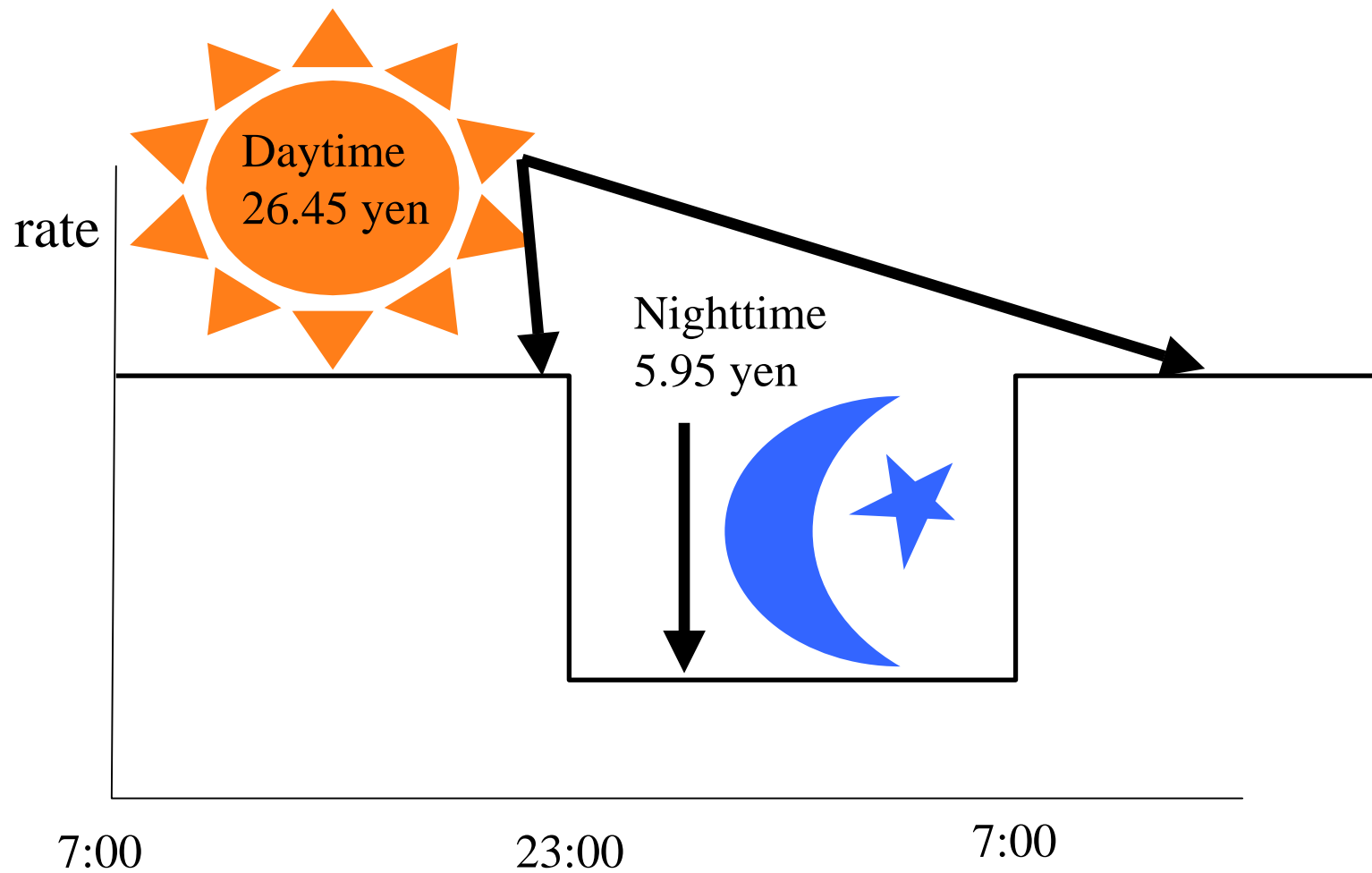
- 1) Dynamic Inefficiency Problem
- 2) Asymmetry of information
- 3) Regulators bear heavy assessment costs and time
- 4) Lack of Price Flexibility
- 5) Excessively capital-intensive production methods
 - Averch & Johnson

The Three-Block Inverted-Rate System

Electric Power Company

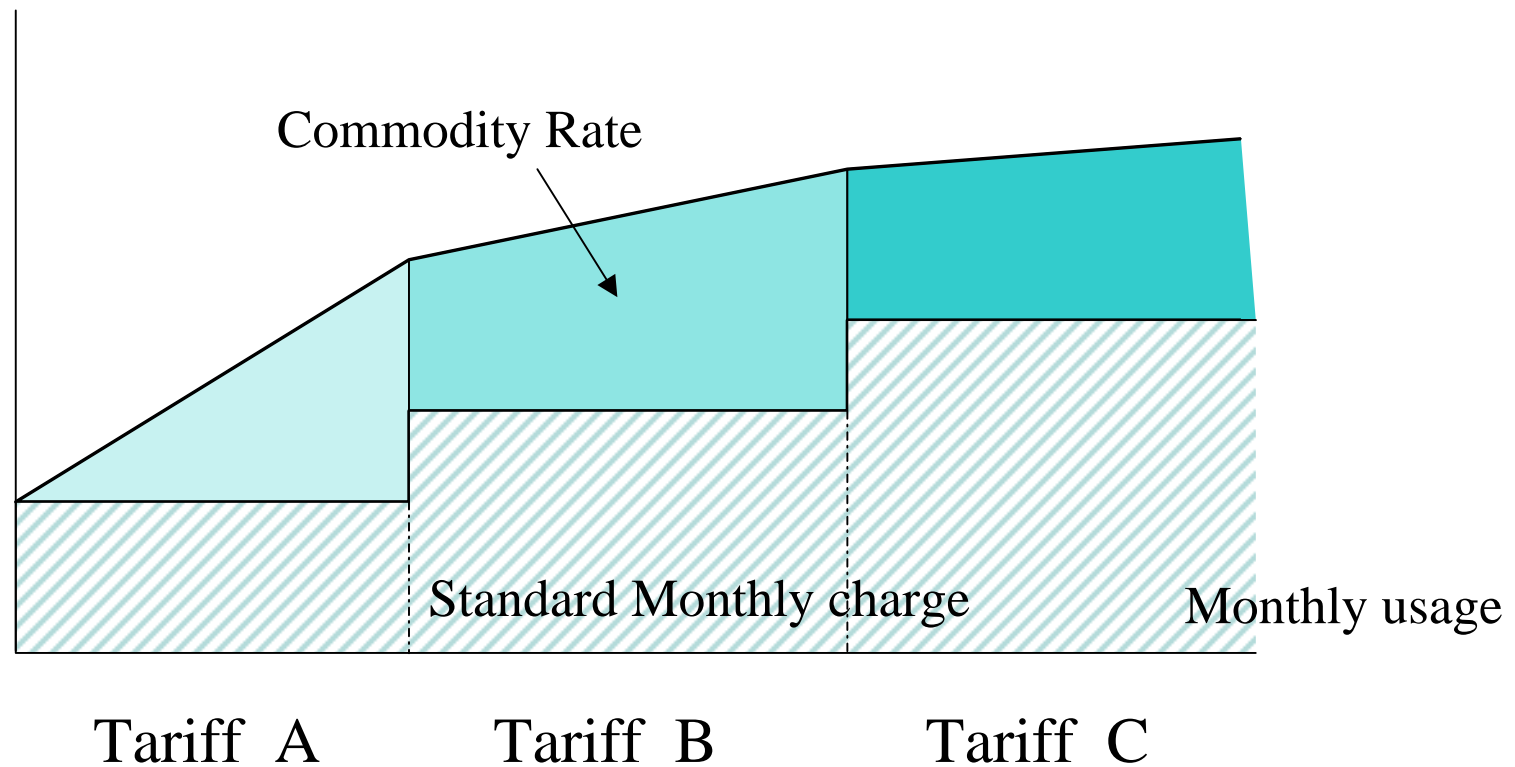


Time-of-use Rate System

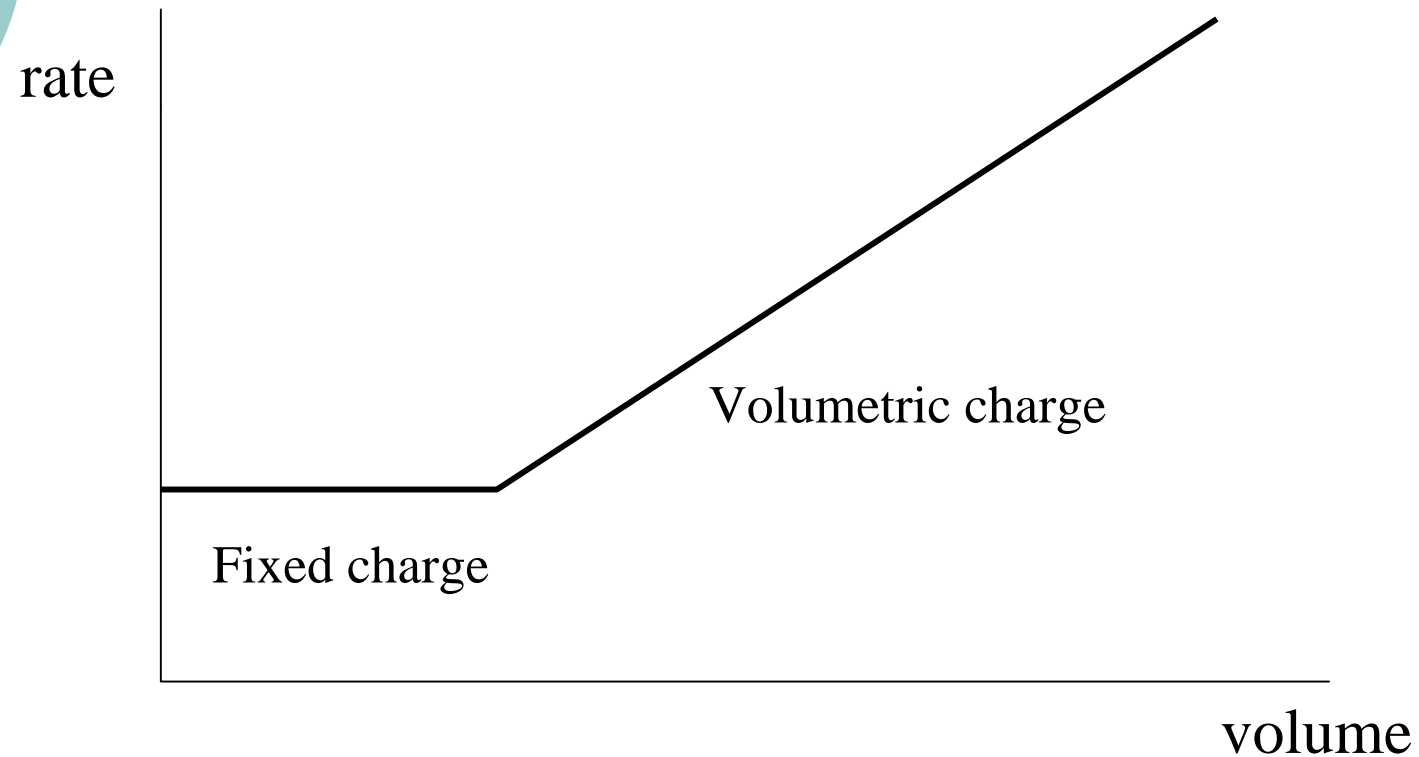


Multiple Two-part Tariff

(General Gas Tariffs)



Two-Part Tariff of Water Supply Industry



Promoting Competition and Effect

Entry Deregulation
Abolishment of Foreign Capital etc.

New Entry (foreign affiliate, another type of industry)

Promoting Competition Case

productivity ↑
price ↓ rate menu ↑
wide range of choice

Non-competitive case

Bottle-neck facilities
Market conduct with
restricted competition

Outline of Rate Regulation

事業者の自由度小

Legally decided or approval

Water supply
Postal service
Highway

Yardstick approach

Approval in case of rising — Electric power, Gas
Price cap — Railway, Bus

Price cap regulation

— Telecom(partially)

Report and order of modification

— Domestic Airline
Telecom

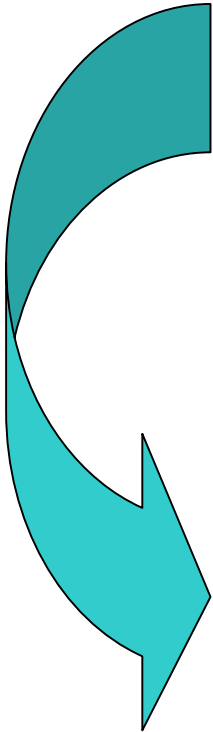
事業者の自由度大

Price Cap Regulation

$$P = RPI - X$$

RPI = retail price index

X = expected productivity growth rate



Utilities have the opportunity to increase their returns by increasing productivity growth beyond X

System of Price Cap Regulation and Competition in the UK electricity industry

	generation	transmission	distribution	supply	end user Price
Regulation (Price Cap)		—transmission use of system charge —connection charge	distribution use of system charge	franchise Market	charge to end user
competition	—pool price —contracts for differences			non-franchise Market	end user Price