

# **IMPACTS OF ELECTRICITY TARIFF SUBSIDIES TO HOUSEHOLDS**

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**Master of Business Administration in Project Management**

Department of Civil Engineering

University of Moratuwa

SriLanka

February 2012

# **IMPACTS OF ELECTRICITY TARIFF SUBSIDIES TO HOUSEHOLDS**

By

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This Dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfillment of the requirement for the Degree of MBA in Project Management.

Department of Civil Engineering

University of Moratuwa

February 2012

Declaration of the candidate & Supervisor

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14nd January 2012

## Abstract

Energy has become the life line of any economy and most vital instrument of socioeconomic development of a country. Eighty percent of the present global primary energy demand is fulfilled by fossil fuels and the fuel reserves are limited. Hence, the energy prices are increasing and are subsidized for Low Income households.

Ceylon Electricity Board (CEB) is the sole author of electricity business in Sri Lanka (SL). Its tariff is also highly subsidized for consumption up to 90 units in Domestic and Religious tariffs through “Increasing Block Price” (IBP) tariff structure. Cost of electricity has drastically increased due to lesser rain and the increase of high cost thermal contribution for power generation in Sri Lanka since 1996 and CEB has been posted to loss maker since 2000. This situation was aggravated by continuing tariff subsidies. Total domestic consumer base at the end of 2010 was around 4 million and analysis of consumption patterns shows that 3.2 million (80%) families out of the total have consumed below 90 kWh per month where highest tariff subsidy is incorporated. Can this entire 3.2 million families in Sri Lanka be really poor?

Main objective of this research is to find that the users below 90 kWh are really poor by a field survey of random consumer sample. The other objectives are to study the present domestic tariff structure and its subsidy and to propose recommendations for tariff revisions for economically viable electricity industry.

Literature review of published tariffs of regional and global countries revealed that most of their domestic tariffs are IBP and few countries give direct payments also for electricity subsidy. Present CEB tariff has higher overall bills for commercial and high end domestic consumers than regional countries. The bills of Domestic consumers of CEB below 90 kWh are lower than most of the regional countries. Literature on tariff studies revealed that IBP tariff has conservational, re distributional and demand elasticity impacts.

The sample field survey of 50 households was carried out in Dehiwala area to ascertain the income and family status of electricity consumers who consume below 90 kWh per month. Survey results revealed that the income of the majority (78%) is above two times of Colombo district poverty level income of Rs. 3469/= per head per month. Only 8% was detected below poverty level (BPL) since they have no regular incomes or jobs. Only one family was found receiving samurdhy benefits. As per the survey results there is no evidence to prove that low unit users are low income families. Also IBP tariff has totally failed to filter the real low income families.

Further analysis of the results by tariff block wise revealed that different income families are scattered in all the blocks. More rich and very rich families in 0 to 30 unit block. Hence Real LICs cannot be found even by reducing the subsidy level of tariff below 90 units.

Finally it is recommended to eliminate the IBP structure of domestic tariff, and make reasonable cost reflective flat tariff in steps. Subsidy should be limited to real low income households who identified by Island wide survey and paid as direct government subsidy

Dehiwala area can be considered only for high population density and congested municipal area. Therefore more surveys should be done in semi urban and rural areas for moderate and generalized solution for the whole country.

## ACKNOWLEDGEMENT

I would like to express my heartiest gratitude to my supervisor Dr.L.L.Ekanayaka of Department of Civil Engineering, University of Moratuwa for his continues guidance and supervision during this dissertation.

My special thanks go to Prof. Asoka Perera, Dr. Rangika Halwatura and Mr. Piyal Ganepola of the Department of Civil Engineering, University of Moratuwa for their valuable suggestion and comments during progress presentations. Also I wish to thank all the members of the Department of Civil Engineering for their support throughout the period.

I appreciate the courage and best wishes I received from Mrs. Yamuna Samarasinghe, DGM(WPS-1), Ceylon Electricity Board, Ratmalana for the study as my immediate superior and to Ceylon Electricity Board for giving me the opportunity and facilities for this study. Also I appreciate the support received from Mr. Kapila (Electrical Superintendant) and his field crew at Dehiwala area office during the field survey. I must thanks the electricity consumers who answered the survey questions with good understanding of my study.

Further I wish to thank Mr. Kulatunga (AFM, Region – 4), Mr. Nuwan Dassanayake (EE-Commercial), Mr. Anura Wijesinghe (ITO, WPS-1) and Mr. Wijeratna (Statistician) of Ceylon Electricity Board and Mrs. Suneetha Cooray, Divisional Secretary, Dehiwala for providing me necessary data for the dissertation.

Finally my sincere thanks go to my wife and family members who wished, supported and spared me at their level best for this study.

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## LIST OF ABBRIVIATION

Abbreviation	Description
ADB	: Asian Development Bank
AHREC	: Andhikhola Hydroelectric and Rural Electrification Centre
BPC	: British Power Corporation
BPL	: Below Poverty Level
CEB	: Ceylon Electricity Board
CPC	: Ceylon Petroleum Corporation
DS	: Divisional Secretary
FAC	: Fuel Adjustment Charge
GDP	: Gross Domestic Product
GOSL	: Government of Sri Lanka
GST	: Goods and Services Tax
GWh	: Giga Watt hours
HT	: High Tension
IBP	: Increasing Block Price
IEA	: International Energy Agency
IRs	: Indian Rupees
KEPCO	: Korea Electric Power Corporation
KJ	: Kutir Jioti (A name of housing scheme in India)
KSA	: Kingdom of Saudi Arabia
KSEB	: Kerala State Electricity Board
kVA	: kilo Volt Ampere
kW	: Killo Watt
kWh	: Killo watt hours
LIC	: Low Income Category
LIHEAP	: The Low Income Home Energy Assistance Program
LT	: Low Tention
MBA	: Master of Business Administration
MERC	: Maharashtra Electric Regulatory Commission
MPE	: Ministry of Power and Energy

MW	:	Mega Watt
NEA	:	Nepal Electricity Authority
NRs	:	Nepal Rupees
Ps	:	Indian Paise (1/100 of Indian Rupee)
PUCSL	:	Public Utility Commission Sri Lanka
Rs	:	Rupees
SL	:	Sri Lanka
Sq	:	Square
TNERC	:	Tamilnadu National Electric Regulatory Commission
TOU	:	Time Of Use
TV	:	Television
US	:	United States
USA	:	United State of America
VAT	:	Value Added Tax
VLIC	:	Very Low Income Category
W	:	Watt
w.e.f	:	with effect from
\$	:	American Dollar



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