

Outline

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Definition and Context

Definition

- TDS per unit is the difference between NEPRA-approved tariff and MoWP-notified tariff (per unit of electricity consumption)

Context

- Power sector subsidies, including arrears were Rs464 billion in FY2012 (of which Rs457 billion were TDS).
- Fiscal deficit in FY 2012 was 8.5% of GDP; without power sector subsidies, fiscal deficit would have been 6.3% of GDP
- Policy of not passing the higher cost to consumers creates excess demand; meeting the entire excess demand can involve unacceptable fiscal burden. The extent to which the government is willing to bear the subsidy burden also determines the extent of load shedding
- Differential subsidies across provinces in a federal structure can also be contentious

Tariff Determination Process

Three Step Process:

- DISCOs send their tariff proposals to NEPRA
- NEPRA determines (reference) tariffs for various categories of consumers for each DISCO
- MoWP notifies a common tariff schedule for all DISCOs, typically below NEPRA-approved tariff

Tariff Determination Process

Adjustments to reference tariff (pass through)

- Monthly
 - fuel price adjustment
- Quarterly
 - capacity and transmission (T&D) charges
 - impact of T&D losses on PPP
 - impact of extra or lesser purchases of units on account of PPP
 - changes in variable cost component of PPP from the reference cost

Tariff Determination Process

Recent Developments

- MoWP notified consumer tariffs on August 5, 2013 after receiving NEPRA tariff recommendations
- MoWP notified another tariff schedule on September 30, 2013, which were higher than those announced in August
- The Supreme Court took suo moto notice and questioned whether the Ministry could notify tariffs without NEPRA being involved in the tariff setting process
- MoWP withdrew its notification and referred the matter to NEPRA
- Since the new tariffs set by MoWP were below NEPRA recommended tariffs, NEPRA did not revise its tariffs and notified its old tariffs together with consumer tariffs incorporating new TDS subsidies, effectively notifying consumer tariffs of September 30, 2013
- The matter is sub judice.

Tariff Determination Process

NEPRA factors in the following in its tariff determination:

- Power Purchase Price (PPP)
 - generation cost - includes energy and capacity costs
 - transmission cost
- Distribution margin
 - allows normal return on assets
- Sales target
 - difference between purchases and sales is line losses
- Prior year adjustment due to:
 - difference between actual and forecast consumer mix
 - over/under recovery on account of distribution margin
 - increase/decrease in sales from reference sale units
 - delay in notification of tariff
 - others

Tariff Determination Process

DISCOs	NEPRA Allowed Line Losses	Actual Line losses
IESCO	9.50%	9.52%
LESCO	12%	13.51%
GEPCO	10.50%	11.24%
FESCO	10.83%	10.91%
MEPCO	15%	17.94%
HESCO	22%	27.73%
SEPCO	28%	39.51%
PESCO	28%	35.97%
QESCO	18%	20.87%
KESC		31.70%

Source: NEPRA State of Industry Report 2012 & NEPRA assessment of the tariff petitions of the DISCOs for FY 2011-12

Service Area of DISCOs

Service Area of Distribution Companies

DISCO	Service Area (Sq. km)	Service Area
PESCO	74,521	Whole Province of Khyber Pakhtunkhwa, except tribal areas
TESCO		Khyber, Bajaur, Mohmand, Orakzai, Kurrum, North Waziristan, South Waziristan, Frontier Region Peshawar, Frontier Region Kohat, Frontier Region Banuu, Frontier Region Tank, Frontier Region Lukhy Murwat, Frontier Region Dera Ismail Khan
IESCO	45,000	Islamabad, Rawalpindi, Attock, Jhelum, Chakwal
GEPCO		Gujranwala, Sialkot, Mandi Bahauddin, Hafizabad, Narowal, Gujrat
LESCO	16,400	Lahore, Sheikhpura, Kasur, Okara, Nankana
FESCO		Faisalabad, Sargodha, Khushab, Jhang, Toba Tek Singh, Bhalwal, Mianwali, Bhakkar
MEPCO	105,505	Multan, Rahim Yar Khan, Khanewal, Sahiwal, Pakpattan, Vehari, Muzaffargarh, Dera Ghazi Khan, Leiah, Rajan Pur, Bahawalpur, Lodhran, Bahawalnagar
HESCO	70,458	Hyderabad, Jamshoro, Shaheed Benazirabad, Sanghar, Matiarai, Badin, Mirpurkhas, Umer Kot, Therparkar, Tando Muhammad Khan, Tando Allahyar, Matiarai and Thatta
SEPCO	56,300	Sukkur, Khairpur, Kashmore, Kandhkot, Jacobabad, Shikarpur, Larkana, Kambar, Shahdadkot, Dadu, Naushehro Feroze, Ghotki, Mirpur Mathelo and Rahim Yar Khan
QESCO	34,800	Whole Province of Balochistan, except Lasbela where KESC is responsible for distribution of power.
KESC	3,530	Whole Karachi including Lasbela

Source: NEPRA's state of industry Report 2012

TDS by Consumer Groups: Methodology

- For each DISCO, TDS (per unit) is calculated as the difference between NEPRA assessed and MoWP notified tariff (per unit of electricity consumption)
- For each DISCO, TDS (per unit) for a consumer sub-category is multiplied by projected consumption of the consumer sub-category
- For each DISCO, TDS calculated for consumer sub-categories are aggregated over the relevant consumer groups
- TDS of a consumer group is aggregated over all DISCOs

TDS Calculation - Example

LESCO					
Description: Residential	Sales Mix (GWh)	Variable Charge (NEPRA Approved) Rs/KWh	Variable Charge (MoWP Notified) Rs./kWh	Subsidy (Rs. million)	
a) For sanctioned load less than 5 kW					
Upto 50 units	132	3	2	132	
Consumption exceeding 50 units					
01-100 units	2412	9.27	5.79	8393.76	
101-300 units	2338	10.5	8.11	5587.82	
301-700 units	733	13.5	12.33	857.61	
Above 700 units	565	15.5	15.07	242.95	
b) For sanctioned load 5kW & above					
Time of Day(TOD)-Peak	0	15	13.99	0	
Time of Day(TOD)-Off Peak	0	9.5	8.22	0	
TOTAL	6180			15214.14	

TDS by Consumer Groups

Consumer Category	Subsidy (Rs billion)	No of consumption units (GWh)	Subsidy per Unit (Rs/ Kwh)
Residential	150.14	36455	4.12
Agricultural	29.04	9466	3.07
Commercial	17.15	6122	2.80
Industrial	49.18	22364	2.20
Bulk Supply	6.9	3030	2.27
Others	-1.25	2298	-0.6
Total	250.06	79665	

Source: NEPRA assessment of the tariff petitions of the DISCOs for FY 2011-12 and Authors' calculations

Tariff Differential Subsidy by DISCOs

- TDS for each DISCO is calculated by adding up TDS for all consumer groups within that DISCO
- Per unit subsidy for each DISCO is calculated by dividing the total TDS for a DISCO by the number of sales units of the DISCO

Tariff Differential Subsidy by DISCOs

DISCOs	Subsidy (Rs billion)	No of Consumption Units (GWh)	Subsidy per Unit (Rs/kWh)
IESCO	8.31	7940	1.05
LESCO	27.58	15437	1.79
FESCO	22.96	8921	2.57
GEPCO	19.30	6754	2.86
MEPCO	36.92	10947	3.37
HESCO	15.61	3725	4.19
QESCO	18.67	4336	4.31
KESC	45.19	10279	4.40
SEPCO	14.01	3097	4.52
PESCO	41.51	8229	5.04
Total	250.06	79665	

Source: NEPRA assessment of the tariff petitions of the DISCOs for FY 2011-12 and Authors' calculations

Tariff Differential Subsidy: Provinces

- TDS by provinces is calculated by identifying DISCOs by their provincial location
 - Some portions of RYK are supplied by SEPCO
 - Lasbela is provided electricity by KESC (NEPRA State of Industry Report 2012)
- Estimates of provincial TDS is obtained by adding subsidies of DISCOs located in a particular province

Tariff Differential Subsidy: Provinces

Provinces	Subsidy (Rs billion)	No of Consumption Units (GWh)	Subsidy per Unit (Rs/kWh)
Punjab	115.07	49999	2.30
Balochistan	18.67	4336	4.31
Sind	74.81	17101	4.36
KPK	41.51	8299	5.00
Total	250.06	79665	

Source: Authors' calculations

Collection/Billing by DISCOs

Provinces	Collection as a percentage of billing
Punjab	97.03
Sindh	60.38
KPK	67.90
Balochistan	36.15

TDS and NFC Award

- NFC award is a revenue sharing arrangement between the federal and the provincial governments
- TDS has resulted in effectively (1) transferring greater share of resources from the federal government to the provinces, and (2) distributing resources among provinces differently from those agreed in the NFC award
- The spirit of the NFC agreement is vitiated if the centre consistently uses its own share of tax revenues on province-specific expenditures in a manner that departs in a major way from the revenue sharing arrangement under the NFC award

TDS and the 7th NFC Award

- TDS sharing among provinces in 2011-12 departs considerably from revenue sharing under the 7th NFC Award

	Share in divisible pool of taxes (%)	Share in TDS (%)
Punjab	51.74	46.02
Sindh	24.55	29.92
KPK	14.62	16.61
Balochistan	9.09	7.47
Total	100.00	100.00

Source: Authors' calculations

TDS and 7th NFC Award

	Shares in 7 th NFC award (%)	Share in NFC award (Rs billion)	TDS (Rs billion)	Shares with TDS included in transfers (Rs billion)	Adjusted shares (%)
Federal / provincial shares					
Federal	42.5	758.28	-250.06	508.39	28.48
Provincial	57.5	1025.91	250.06	1275.8	71.52
Total	100	1784.91		1784.19	100
Inter provincial shares					
Punjab	51.74	530.81	115.07	645.88	50.62
Sindh	24.55	251.86	74.81	326.49	25.60
KPK	14.62	149.99	41.51	191.5	15.01
Balochistan	9.09	93.26	18.67	111.93	8.77
Total	100	1025.91	250.06	1275.8	100

Source: Authors' Calculations

Conclusion

- Applying uniform tariffs across the country in the presence of very divergent NEPRA determined tariffs, results in differential subsidies across DISCOs and provinces
- Divergent tariffs across provinces are principally because of differences in line losses
- Line losses are on account of technical losses and commercial losses – the latter an euphemism for pilferage and corruption

Conclusion

- DISCOs differ greatly in terms of area served and this can explain differences in technical losses
- Differential subsidies to DISCOs because of differences in technical losses can be rationalized but differential subsidies on account of commercial losses is contentious
- Neither DISCOs nor NEPRA distinguish between technical and commercial losses. This opaqueness should be removed to design tariff and subsidy policies that do not reward corrupt practices

Conclusion

- TDS increased rapidly after the oil price escalation in 2007-08
- Federal government finances since 2007-08 have been severely disrupted by TDS
- Oil price increase is not a temporary shock
- Federal government cannot sustain this level of subsidy without severe consequences for macroeconomic stability

Conclusion

- TDS should be brought down and/or provinces be made partners in expenditure sharing
- The next NFC award needs to incorporate a mechanism for federal/provincial sharing of expenditure shocks and subsidies that do not place an unsustainable fiscal burden on the centre or provinces

THANK YOU