

ELECTRICITY SUBSIDY IN PUNJAB A CASE STUDY OF AGRICULTURE SECTOR

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ABSTRACT

Agricultural development is a condition precedent for the overall development of the economy. In view of this, after independence tremendous efforts were made to boost the economy through agriculture as one of the tools for development. The central as well state government of India started the scheme of subsidies on purchase of various agriculture inputs like electricity, fertilizers, irrigation, credit and seeds etc. to facilitate the farmers. In this context, this paper tries to analyse the free electricity given by Punjab Government to agriculture sector and its impact on the different aspect of the whole economy. It is observed that the electricity subsidy is regressive, as large size category farmers have more land, pump sets, electricity load etc. and they use more quantity of electricity as compared to small and medium size farmers. The findings suggested that from farmers' point of view they are ready to pay bills for electricity as uninterrupted supply of electricity is given to agriculture sector. As a result government should impose flat rates on electricity supply given to agriculture sector. If implemented, it will reduce state electricity board's burden and this amount can be used for production of more electricity, reducing the need of purchasing electricity at very high prices, which adds to the deficit of state finance.

Keywords:- Agriculture, Development, Electricity Subsidy, Production.

INTRODUCTION

The Indian agrarian economy on the eve of independence was critical in situation. It could be characterized totally primitive, deteriorative and turbulent. After partition, the country was left with 82 per cent of the total population of undivided India as well as only with 69 per cent of land under rice, 65 per cent under wheat and 75 per cent under all cereals. The deficiency of food grains was quite alarming and aggravating at that time (Chahal, 1999).

In view of this, after independence tremendous efforts were made to boost the economy through agriculture as one of the tools for development. Specific programmes like new agriculture technology were introduced to convert agriculture into a successful and prosperous business, to bring more land under cultivation and to raise

agriculture production. In India, the adoption of new agricultural technique was costly than that of traditional method of cultivation. In traditional method, inputs were least expensive, on the other hand inputs in modern technology like high yielding varieties of seeds, fertilizers, farm mechanization and irrigation were very costly and Indian farmers being poor were not in a position to buy these expensive inputs. Then on the recommendations of food grain price committee (Jha Committee), the Government of India started the scheme of subsidies on purchase of various agriculture inputs to facilitate the farmers (Singh, 1994).

Now, agriculture subsidies have become a debatable issue in India. All of these subsidies by reducing the prices of the inputs, served in the initial stages of green revolution, as incentives to the farmers for adopting the newly introduced seed-cum-fertilizer technology. These helped in raising the agricultural output, after some time, the amount paid on these subsidies began to rise (Gulati and Narayanan, 2003).

In this paper, an attempt is made to analysis the electricity subsidy given by Punjab government to agriculture sector and also tries to discuss the impact of this subsidy on different aspect of the economy.

The main objectives of this study are:- to study the current status of power sector in Punjab, to analyse free electricity to Punjab farmers, to study the impact of free electricity to Punjab farmers and to suggest ways and means for giving free electricity to Punjab farmers in future.

The proposed study is based on primary as well as secondary data. For collecting the primary data a survey is conducted, a sample size of 471 electricity consumers is taken out. Sampled farmers have been divided into three categories on the basis of their farm size, small farmers are those who own land up to five acres, medium farmers own land between five to ten acres and large farmers own land above ten acres. A detailed questionnaire is prepared for collecting information about the agriculture subsidies. The main sources of secondary data are:- Punjab State Electricity Board, Government of Punjab, Statistical Abstract, Ministry of Finance, Government of Punjab,

Economic Survey Department, Punjab Human Development Report , Punjab State Electricity Regulatory Commission etc.

FREE ELECTRICITY TO AGRICULTURE SECTOR

The tariff structure of Punjab State Electricity Board (now is unbundled in Punjab State Power Cooperation Limited (PSPCL) and Punjab State Transmission Cooperation Limited (PSTCL)) is built on principles of cross subsidization with certain categories of consumers (commercial and large industry) subsidizing other categories (agricultural pump sets and domestic). The tariff for agricultural pump sets was quite low till 1996-97. But in February 1997, the power supply to agricultural pump sets was made free. In the 'Election Manifestos' issued by the Shiromani Akali Dal and Indian National Congress

Committee (I) Punjab issued from time to time before the elections, the electricity supply to the Agricultural Pump sets (AP) consumers in the State was given free of cost from 14.2.1997 to 31.3.2002 by Punjab Government leading by Shiromani Akali Dal (Badal) and again the then Chief Minister of Punjab, of Indian National Congress Committee (I), Capt. Amarinder Singh announced the subsidy in the shape of free power to farmers in Punjab from 15th August, 2005 'Indian Independence day' which is still continued.

Distribution of free electricity to Punjab farmers during 1996-97 to 2010-11 is shown in table 1. This table reveals that subsidy of electricity increased from Rs. 404 crores in 1996-97 to Rs.1219 crores in 1999-00 and again increased to Rs. 1768.86 crores in 2006-07 and further increased to Rs.3487 crores in 2010-11.

Table 1

Distribution of Free Electricity to Punjab Farmers during 1996-97 to 2010-11

Years	Amount of Subsidy (Rs. Crores)
1996-97	404
1997-98	604
1998-99	928
1999-00	1219
2000-01	1462

The above table reveals that the amount of free electricity is increasing continuously. In 1999-00 (as compared to the year 1996-96), it has increased by 201.73 per cent and 151.59 per cent in 1999-00 (as compared to 2005-

2010-11, total sale is 33432 MU out of which 10989 MU sold to agriculture pump sets. This table shows that the percentage share of sale of electricity to agriculture pump sets has increased during 2007-08 to 2011-12. The

2000-01	1862
2005-06	1386
2006-07	1768.86
2007-08	2159.84
2008-09	2294.90
2009-10	2804.94
2010-11	3487

Source:- PSPCL, Petition for Aggregates Revenue Requirement and Determination of Tariff for the FY 2011-12.

06). Total sale of electricity and sale to agriculture pump sets during 2007-08 to 2011-12 is shown in table 2. In 2007-08, total sale is 31540 Million Units (MU), out of which 9537 MU sold to agriculture pump sets whereas in share has increased from 30.24 in 2007-08 to 32.01 in 2008-09 and again increased to 32.60 in 2010-11 and further increased to 33.88 in 2011-12.

Table 2

Distribution of Energy according to sale to Agriculture Pump Sets during 2007-08 to 2011-12

Sr. No.	Particulars	2007-08	2008-09	2010-11	2011-12
1.	Total sale (in MUs).	31540	33315	33432	36165

2.	Energy sales to agriculture consumers (in MUs).	9537 (30.24)	10014 (30.06)	10898 (32.60)	12253 (33.88)
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Source: (1) PSEB (2008-09), Aggregate Revenue Requirement and Tariff Revision, March 31.

(2) PSPCL, Petition for Aggregates Revenue Requirement and Determination of Tariff for the FY 2011-12.

The agriculture sector has got 30.24 per cent and 33.88 per cent of electricity of total sale within the state

in 2007-08 and 2011-12 respectively. The average cost of power as well as purchasing cost from traders during 2006-07

to 2009-10 is indicated in table 3. This table further indicates that generation as well as purchasing cost is increasing throughout the study period. Average generation cost has increased from Rs.3.39 per unit in 2006-07 to Rs.3.67 per

Table 3
Average Cost of Power Generation and Average Cost of Power Purchase during 2006-07 to 2009-10

(In Rs.)		
Years	Average generation cost per unit	Average purchase cost per unit from traders
2006-07	3.39	4.85

From the above table, it may conclude that the purchasing cost of the electricity is higher than that of generation cost of electricity in the Punjab State. In 2008-09, the purchasing cost is 69.21 per cent more, whereas in 2009-10, it was 82.79 per cent more than that of generating cost.

FINANCIAL POSITION OF STATE ELECTRICITY BOARD AND STATE GOVERNMENT

The Balance Sheet of the Punjab State Electricity Board for the years consistently shows a rising mismatch between the assets and liabilities, resulting from mounting accumulated losses. The main reason is due to free electricity to farmers, SC and BPL consumers. The Punjab

Table 4
Revenue Gap of Punjab State Power Cooperation Limited during 1996-97 to 2010-11

Year	Revenue Gap/ Surplus
1996-97	108
1997-98	49
1998-99	51
1999-00	4
2000-01	-32
2001-02	-31
2002-03	-352.73
2003-04	-164.9

The financial position of Punjab State government during 1996-97 to 2010-11 is shown in the table 5. The fiscal deficit of Punjab government has increased from

unit in 2008-09 and again increased to Rs.4.01 per unit, whereas average purchasing cost increased from Rs.4.85 per unit in 2006-07 to 6.21 per unit in 2008-09 and again increased to Rs.7.33 per unit in 2009-10.

2007-08	3.53	5.74
2008-09	3.67	6.21
2009-10	4.01	7.33

Source: PSPCL, Petition for Aggregates Revenue Requirement and Determination of Tariff for the FY 2011-12.

State Electricity Board claims huge amount of unpaid subsidy from the Government and this device is sought to be used to meet the assets and liabilities gap in the Balance Sheets.

The consistent stand of the Government of Punjab has been that the Government will pay subsidy each year only up to the amount equal to the interest due from Punjab State Electricity Board on loans taken from Government of Punjab. Revenues gap of Punjab State Power Cooperation Limited during 1996-97 to 2010-11 is shown in the table 4. The revenue gap increased from Rs. 32 crores in 2000-01 to Rs.352.73 crores in 2002-03 and again increased to Rs.1189.77 crores in 2007-08 and further increased to Rs.9656.53 crores in 2011-12.

2004-05	-618.6
2005-06	13
2006-07	-192.3
2007-08	-1189.77
2008-09	-1366.45
2009-10	-1978.05
2010-11	-5427.72
2011-12	-9656.53

Source:- (1) PSEB(2008), The technical and Financial Status Report, March 31

(2) PSPCL, Petition for Aggregates Revenue Requirement and Determination of Tariff for the FY 2011-12.

Rs.1464.68 crores in 1996-97 to Rs. 4383.58 crores in 2006-07 and again increased to Rs. 6690.45 crores in 2008-09, whereas subsidy to agriculture sector has also increased from

Rs.404 crores in 1996-97 to Rs.2159.84 crores in 2007-08

and again increased to Rs.3487 crores in 2010-11.

Table 5
Financial Position of Punjab State Government during 1996-97 to 2010-11

Year	Fiscal Deficit (Rs. Crores)	Electricity subsidy (In Rs. Crores)	Percentage share of electricity subsidy in Fiscal deficit
1996-97	1464.68	404	27.58
2005-06	2653.97	1386	52.22

The above table indicates that the percentage share of subsidy in fiscal deficit has increased from 27.58 in 1996-97 to 52.22 in 2005-06 and declined to 40.35 in 2006-07 and increased to 46.91 in 2007-08.

IMPACT OF FREE ELECTRICITY ON PUNJAB FARMERS

To know the impact of free electricity to Punjab farmers for their agriculture pump sets, I conducted a survey for collecting primary data, a sample size of 471 electricity consumers is taken out. Sampled farmers have been divided into three categories on the basis of their farm size, small farmers are those who own land up to five acres, medium farmers own land between five to ten acres and large farmers own land above ten acres. A detailed questionnaire is prepared for collecting information about the agriculture subsidies.

During the survey, it is observed that the income of farmers is depending on the agriculture. According

Table 6
Distribution of Famers in Punjab according to their Income

Income Level	Small	Medium	Large	Total
Less than 2 Lac	87 (51.79)	0 (0)	0 (0)	87 (18.47)
2-3 Lac	78 (46.43)	45 (22.73)	0 (90)	123 (26.11)

2006-07	4383.58	1768.86	40.35
2007-08	4603.843	2159.84	46.91
2008-09	6690.45	2294.9	34.30
2009-10	NA	2804.96	-
2010-11	NA	3487	-

Source:- (1) PSPCL, Petition for Aggregates Revenue Requirement and Determination of Tariff for the FY 2011-12.
(2) Government of Punjab, Economic survey of Punjab, Various years.

to them due to free electricity, cost of inputs on agriculture production was reduced as compared to the previous years when free electricity was not given. Large famers are more beneficiaries than small and marginal famers from free electricity as they have more electricity motor connections and load than small as well as marginal farmers. Due to irregular supply of electricity to agriculture sector farmers are using diesel pump sets, according to famers the cost of diesel pump sets is more than electricity pump sets. As a result majority of sampled farmers are ready to pay bills if regular electricity supply is given to them for irrigation purpose.

The distribution of farmers according to their income from agriculture per year is shown in table 6. Out of total 471 farmers, 18.47 per cent are getting less than two lakhs, 26.11 per cent between 2 lakhs to three lakhs, 21.66 per cent between three lakhs to four lakhs and 33.76 per cent 33.76 per cent.

3-4 Lac	3 (1.79)	96 (48.48)	3 (2.86)	102 (21.66)
Above 4 Lac	0 (00)	57 (28.79)	102 (97.14)	159 (33.76)
Total	168	198	105	471

Source: - Field Survey, 2010-11.

Percentage share is shown in parentheses.

Majority (87 per cent) of small farmers are earning less than two lakhs, 48.48 per cent of medium farmers between 3 lakhs to four lakhs, whereas most (97.14 per cent) of large farmers above four lakhs income from agriculture sector.

MAJOR FINDINGS, SUGGESTIONS AND POLICY IMPLICATIONS

The foregoing discussions about the impact of free electricity on the different aspects of Punjab economy reveals that all the farmers, SC and BPL domestic consumers are getting benefit from free electricity, whereas big farmers are getting more benefits from this subsidy as they have more land, more submersible pump sets and more than one electric connections etc. Due to this subsidy, Punjab State Electricity Board got commercial losses of Rs.1382.51 Crores during 2007-08. The expenditure of Punjab Government is also increasing than its revenue. During 2007-08, the share of electricity subsidy was 8.1 per cent in revenue expenditures of the State Government. It is further observed that the cost of purchase of power is more than the generation cost of

power from own Thermal power Plants and Hydel Power Stations. Due to free electricity, the demand for new connections for tube wells is increased, whereas water table is decreased. This increase in number of tube wells along with deepening water level aggravated the power crisis as more power is needed to draw same amount of water from the deeper water level.

Due to irregular supply of electricity farmers have to use diesel pump sets to irrigate the crops. The expenditure of diesel pump sets is very high as compared to flat rates of electricity. From farmers point of view they are ready to pay bills for irrigation as uninterrupted supply of electricity is given to agriculture sector. As a result government should impose flat rates on electricity supply given to agriculture sector. If implemented, it will reduce state electricity board's burden and this amount can be used for production of more electricity, reducing the need of purchasing electricity at very high prices, which adds to the deficit of state finance. Government should keep aside its motive to please voters or strengthen the vote bank, it should frame rational policy in the favour and welfare of the state.

REFERENCES

- Bhalla, G.S. , Indian Agriculture, Uppal Publisher House, New Delhi, 1994, 6-10
- Chahal, T.S., *Machinisation of Punjab Agriculture and its impact* (Macrosd Printers, Amritsar, 1994).
- Fan, Shengyen, Ashok Gulati and Sukhaseo Thorat ,Investment, Subsidies and Pro-poor growth in Rural India, *Agricultural Economic*, 39(2), 2008, 163-170
- Government of Punjab, Statistical Abstract, various years
- Gulati, Ashok , Investment, subsidies and pro-poor growth in rural India, *Economic and Political Weekly*, 18(3), 2007
- Gulati, Ashok and Sudha Narayanan , *The subsidy syndrome in Indian Agriculture* (Oxford University Press, New Delhi, 2003)
- Gupta, Anjali, Impact of agricultural subsidies, *Economic and Political Weekly*, 39(4),1984, 48-53
- Halmandage, B.V. and Dr.N.N.Munde ,A Study of fertilizer subsidy in India, *International Research Journal*, 1(7), 2010, 45-50
- Sharma, V.K., Impact of agricultural subsidies on Nation Income and agricultural production, *Economic and Political Weekly*,47(7),,1982 66-71
- Singh, Surrender , *Agricultural Development in India-A Regional Analysis* (Kaushal Publication, Amritsar,1994).

- Government of India, Annual report on the working of state electricity boards and electricity department, Power and Energy Division, Planning Commission, various issues.
- Government of Punjab, Agriculture Department, Chandigarh