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**IMPACT OF PRIVATISATION  
OF POWER ON AGRICULTURE**

**BY**

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# **IMPACT OF PRIVATISATION OF POWER ON AGRICULTURE**

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- The ever increasing reliance on the more costly thermal power to the exclusion of cheaper hydel power and the recent boost in the induction of private thermal generation plants has a steady eroding factor on the agricultural economy of Pakistan in general and Punjab in particular. Since power is a key factor in supplementing irrigation water supplies by tubewells run on power or diesel it would be advisable to examine the impact of escalating power rates on the economy of ground water use in agriculture. The factor of tubewell economy would assume more poignancy from the fact that during the past 20 years additional area irrigated by tubewells was 2.26 million hectares as against 1.80 million hectares brought under canal irrigation by water storage dams at Mangla and Terbela. Table-I depicts the above picture.
2. The type of power used in operating the private tubewells in different provinces is depicted in Table-II. This shows that in Punjab out of a total of 203,602 private tubewells only 60,491 i.e.29.7 per cent are run on power, the remaining i.e. 70.3 per cent being run on diesel. The collective picture of other three provinces is on the contrary totally different with a collective operation of 79 % of tubewells by power and 21 per cent by diesel. The higher use of power in N.W.F.P and Balochistan could be explained somewhat by the lower power rates of tubewells as compared to Punjab as shown in Table-III, being Rs. 39 lower per horse power per month. However it is difficult to explain as to how Sind farmers, paying a higher tariff like Punjab, can afford to run a higher percentage of their tubewells on power unlike Punjab farmers who can no longer afford to operate electric tubewells. The only hidden factor as far as Sind is concerned may be greater theft of power and non-payment of power bills due to a more prevalent feudal or wadera culture in that province. This factor cannot be belittled as similar non-payment of huge arrears of WAPDA power bills have been reported from N.W.F.P & Balochistan where the Sardari system or the Khawarin operate with impunity.
  3. It appears in the prevailing millieu that Punjab agriculture is suffering adversely in paying higher bills for operating the tubewells

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which has well nigh made it impossible to use power and now with the escalating power tariff due to the induction of more thermal units loaded further with royalty charges would simply make it impossible for using power to draw out ground water. Naturally it would add to the use of diesel which would also get costlier due to constant and repeated devaluation of the Pakistani rupee to make the tubewell operation in Punjab virtually impossible. The above scenario of uneconomic tubewell irrigation has to be seen in the background of shrinking canal water irrigation supplies due to silting of existing water storage dams and non construction of any new dam in the foreseeable future. For the first time in two decades the area irrigated by Government canals dipped from 11.79 million hectares in 1992-93 to 11.5 million hectares in 1993-94 by 2.3 per cent or by 2.8 lac hectares which is thought provoking as to what would happen in the coming years if the same diminishing trend continued in the canal irrigation. This decrease was limited to Punjab and Sind. We have opted for a greater share of thermal power to an extent of 52 per cent at present which would further escalate with the coming into operation of more private thermal power plants pushing the consumer price to 10 US cents per unit or Rs. 3.45 per unit. The generation of such high priced power units would spell disaster not only for industry but also for our already precarious agriculture. This all points out to the dire need for building more hydro-electric dams in Pakistan including the priority dam of Kalabagh that would unlike Ghazi Barotha not only generate cheaper power but also store 6.1 MAF of water for use in irrigated agriculture. This would tend to reduce the dependence on the uneconomic tubewell water that is already pumping salts into the land as we are overdrawing 48 MAF of ground water against recharge of 45 MAF annually as per estimates of the World Bank. Another point of interest would be that the reduced canal irrigated area of Punjab was more than made up by an increase in tube well irrigated area to an extent of 2.8 lac hectares. The same could not be done in Sind which was a net loser in the irrigated area. However the escalating trend of compensating the shortfall of canal irrigated area by tubewell irrigation in Punjab does not augur well for the production per hectare due to poor quality of water with higher salt contents as compared to river water. This is in turn reflected in the reducing yields per hectare of such major crops as wheat and cotton in Punjab lately. This trend is likely to continue in the absence of any augmentation plans for sweet river water irrigation.

TABLE - I

**AREA IRRIGATED BY DIFFERENT SOURCES  
(MILLION HECTARES)**

	TOTAL	CANALS	TUBEWELLS	OTHERS
1975-76	13.63	10.19	2.39	1.05
1979-80	14.74	10.74	2.74	1.26
1984-85	15.28	11.09	3.29	0.90
1989-90	16.89	11.63	4.29	0.97
1990-91	16.96	11.74	4.26	0.96
1991-92	16.85	11.99	4.31	0.55
1992-93	17.11	12.24	4.30	0.57
1993-94	17.12	12.00	4.65	0.47
% CHANGE SINCE 75-76	25.5 %	20.11 1.81	79.9 % 2.26	- 45.7 %

TABLE- II

**NUMBER OF TUBEWELLS (INCLUDING SURFACE PUMPS)  
BY TYPE OF POWER**

Administrative Unit	Total Number of Tubewells & Surface Pumps	Government Tubewells (Including Surface Pumps)			Private Tubewells (Including Surface Pumps)		
		Total	Electric	Diesel	Total	Electric	Diesel
Punjab	214,108	10,506	10,210	296	203,602	60,491	143,109
Sindh	9,479	2,158	2,151	7	7,321	5,559	1,764
N.W.F.P.	9,217	647	639	8	8,570	7,939	631
Balochistan	5,186	118	72	46	5,068	3,080	1,988
Pakistan	237,990	13,429	13,072	357	224,561	77,069	147,492

Source:- Census of Agricultural Machinery 1984.

**TABLE- III**  
**ELECTRICITY RATES FOR AGRICULTURAL TUBEWELLS**

Effective from	Tubewells for Reclamation Purpose (SCARP)			Agricultural Tubewells / Lift Irrigation Pumps in Punjab and Sindh Areas					Agricultural Tubewells / Lift Irrigation Pumps in N.W.F.P. and Balochistan Areas				
	Fixed Charges (Rs./K.W./Month)	Energy Charges (Ps/KWM)	Additional Surcharges (Ps/KWM)	Fixed Charges (Rs./K.W./Month)	Energy Charges (Ps/KWM)	Additional Surcharges (Ps/KWM)	Flat Rate Tariff (Rs./M.P./Month)	Additional Surcharge (Rs./M.P./Month)	Fixed Charges (Rs./K.W./Month)	Energy Charges (Ps/KWM)	Additional Surcharges (Ps/KWM)	Flat Rate Tariff (Rs./M.P./Month)	Additional Surcharge (Rs./M.P./Month)
Nov. 1,1980	-	36.0	-	14.00	22.3	-	-	-	12.00	15.3	-	-	-
Nov. 1,1981	-	40.0	-	19.00	23.0	-	-	-	17.00	16.0	-	-	-
July 1,1985	-	44.0	-	21.00	25.0	-	-	-	19.00	18.0	-	-	-
July 1,1986	-	44.0	-	21.00	25.0	-	60.00	-	19.00	18.0	-	50.0	-
July 1,1987	-	51.0	-	24.00	29.0	-	70.00	-	22.00	21.0	-	58.00	-
July 31,1988	-	61.0	-	29.00	33.0	-	84.00	-	26.00	25.0	-	70.00	-
Sept. 1,1989	-	73.0	-	33.00	42.0	-	109.00	-	31.00	30.0	-	91.00	-
July 1,1990	-	79.0	-	38.00	45.0	-	131.00	-	34.00	32.0	-	109.00	-
April 1,1991	-	83.0	-	41.00	49.0	-	147.00	-	36.00	34.0	-	122.00	-
Aug. 10,1993	-	83.0	25.00	41.00	49.0	25.0	147.00	29.00	36.00	34.0	25.00	122.00	24.00
Nov. 7,1994	-	83.0	84.0	41.00	49.0	89.0	147.00	85.00	36.00	34.0	78.00	122.00	71.00

Source:- WAPDA, WAPDA House, Lahore.