

## **Abstract**

Nowadays, energy management has a special importance and energy is regarded as the infrastructure and the key of development in countries. Energy is used as a production input in the agricultural sector. Therefore, timely and safe supply of energy with appropriate price could lead to increase in the agricultural productions. In the current study, the consequences of adjustment electricity energy and gasoline price policy on the cropping pattern Neyriz farmers, using positive mathematical programming and Production function with constant elasticity of substitution were investigated. The data being used were collected by completing a questionnaire and personal interview with farmers at Abadeh Tashk district, affiliated to Neyriz in 2011. The Results showed that with increasing cost of electricity energy under the scenarios of 5, 10, 20 and 30 percent, in the first group and under the fourth scenario, the area under irrigated barely cultivation and tomato, had a reduction of 45.24 and 2.04%, respectively, while in the second group, the irrigated barely and corn had a reduction of 70 and 10.8%, respectively. In the third group, with 30% increasing in the electricity price, the barley crop was removed from the cropping pattern and other crops of the third group replaced itstead. In the first and second groups, with increase in gasoline price, the area under cultivation and the profit of farmers were reduced that amount of reduction was more than for farmers of the first group. Also, the results showed that the reaction of farmers to increase price was negative. Note that in addition to, the income of farmers in all the three groups had reduced.

**Key words:** Cropping pattern, Positive Mathematical Programming, Policy, Neyriz County



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