







Table II- Results of the model

Variables	Coefficient	Std. Error	Prob.
$C_t$	0.101948	0.006	0.0000
$C_t(-1)$	0.041082	0.009979	0.0001
$C_t(-2)$	0.028023	0.006478	0.0001
$R_t$	-0.020709	0.007473	0.0075
$CO_{2t}(-1)$	-0.281224	0.099698	0.0065

Table II indicates that in 5 percent level of significance, all of the variables are meaningful inside the model. The positive coefficients of coal ( $\beta_1$ ,  $\beta_3$  and  $\beta_4$ ) and the negative coefficient of renewables ( $\beta_2$ ) indicate the way those variables are affecting the CO<sub>2</sub> emission by the U.S. electric power sector. In addition to the p-value that determines the significance of a variable inside the model, there is the pillar “R<sup>2</sup>” value of the model indicating that how well the model is fitted. Table III shows us the amount of “R<sup>2</sup>” and also “R<sup>2</sup> adjusted” of the fitted model.

Table III- "R-squared" and "R-squared adjusted" values of the model

R-squared	0.915053
R-squared adjusted	0.909294

Table III proves that variables are chosen correctly and that independent variables are actually affecting the dependent variable. But before the model could be fully trusted, the residuals diagnostic tests (Normality test, Heteroskedasticity test and serial correlation LM test) should be performed. Fortunately, the aforementioned tests were performed and the model passed them successfully; This would imply the flawlessness of the fitted auto-regressive model. For instance, Figure 4 demonstrates the result of performing the normality test and Table IV explains the results of performing the heteroscedasticity test.

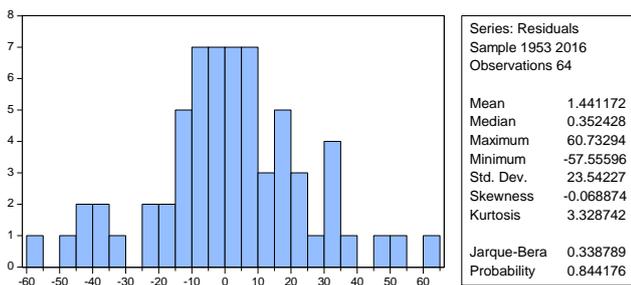


Fig. 4. Histogram normality test

Table IV- Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.123626	Prob. F(5,58)	0.3581
Obs*R-squared	5.651852	Prob. Chi-Square(5)	0.3416
Scaled explained SS	5.546201	Prob. Chi-Square(5)	0.3529

## 4. Conclusion

There are multitudes of proofs indicating the urgency of global warming and climate change. Although those phenomena are well-known and well-spoken in today’s world, some decisions of politicians and policy makers convey the unimportance of those phenomena to them. This research, takes the smallest step to provide an analytical and mathematical evidence, that “climate change” issue is not a fantasy and could endanger the lives of all human beings if not taken seriously. After all these explanations and model-buildings, it is now feasible to answer the main question and the title of the paper; Yes, green policies would yield tangible results if adopted and implemented wisely. If environmental issues keep to be overlooked like before and policy makers do not consider environmental ramifications of their decisions, global warming would definitely exceed 2 degrees.

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