Central Asian economies enjoyed impressive economic growth after the long recession following the dissolution of the Soviet Union in 1991. This study examines the economic and energy development policies and strategies of these countries from various perspectives. We use statistical data analysis techniques and mathematical modelling methodologies focusing upon regression modeling analysis in order to deal with the economic and energy related data during the period 1990-2014, investigating the relationships among economic growth, energy production, and the trade of energy resources. Findings show that energy production growth had a statistically significant positive impact on GDP growth in fossil-fuel rich Kazakhstan, Uzbekistan, and Turkmenistan while the study also established negative impact of GDP growth on the trade balance of Central Asian countries, except for Turkmenistan. Another findings follow that foreign direct investment had a significant influence on balance of trade in the cases of Uzbekistan and Turkmenistan, which instituted import substitution policies right from their initial years of independence. Quantitative measurement of oil and natural gas prices’ impact on trade demonstrated that in most countries, except Turkmenistan, oil price increase brings rather negative impacts on the trade balance, while natural gas price increase brings positive impacts in all countries except Turkmenistan. Based on these quantitative investigation on economy, energy, and trades we propose future energy strategies for Central Asian countries targeting for 2030, stressing the importance of diversification of economies.