In this talk I'll give an introductory exposition regarding the modeling and valuation of certain Equity and Debt instruments associated with assets that arise in energy commodities markets. In particular, the mathematics will illustrate how hedging commodities risk can lower the cost of debt, and hence can lead to higher equity valuations. I will discuss how the math looked like before and after the credit bubble of 2008. Underlying commodities differential equations and their estimation will be discussed, depending on time.