Energy Analysis Fall 2019

Finance 4397/7397

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The entry level position in the energy industry is normally as an analyst. This can vary from market analysis to structured products to risk, etc. The purpose of this directed studies is to give the student hands on exposure to energy analysis and the current state of the energy markets.

Student's have the option of taking a deep dive into the Petroleum Markets or the Natural Gas Markets.

This class is conducted live online once a week. Day of week and time TBD.

Fundamental Analysis:

Supply:

  Production, technology changes imports, inventories, seasonality, weather, cost of production

Demand:

  Economic growth, Seasonality, exports weather, technology changes, general demand for commodities (e.g. FX, Crude Oil), price of substitutes

Students will learn how to create a dashboard utilizing **Spotfire** of the various supply & demand factors.

Data:

 Argus historical and current worldwide petroleum market data.

 S&P Platts historical and current worldwide energy prices; Petroleum, Natural Gas liquids & natural gas (including worldwide LNG)

EIA, **IEA**, **OPEC**, **KPLER** & **Clipper Data** (real time worldwide shipping of petroleum, natural gas liquids & LNG), **PointLogic** (real time nat gas & power flows), **Baker Hughes** (rig count).

Students will learn how to create data sets for analysis using **ZEMA** (ZePower). **Zema** is a state of the art data aggregating system widely used in the energy space. Data is aggregated via **ZEMA** and then organized pictorially with the **Spotfire** dashboard. (see example below)

Daily market reporting is provided by **Argus**, **S&P Platts** & **Gelber Daily Report.**

Market trends reporting is provided by **Reuters**, **Bloomberg**, **RBN Energy** (blog), **McKinsey Insights**, **Clipper Data (**blog), **API SmartBrief**, **Energy Law 360, GARP Daily News**.

Technical Analysis

Utilizing **CQG** & **FutureSource** students will learn how to navigate futures markets' quote, charting and technical analysis. Fundamental analysis gives analysts supply & demand indications and technical analysis provides timing indicators for hedging or buying/selling a market.

There will be several deliverables during the semester:

1) Market Analysis.
   Whether the student will work in this area of analysis is not critical, what is important is that the student learns how to look at all of the available information (fundamental & technical) and make informed statements about the present market and likely future developments.

2). Price/Quantitative Analysis
   Price and quantitative analysis is a key component of an analyst's job. During the semester there will be various assignments that could cover:
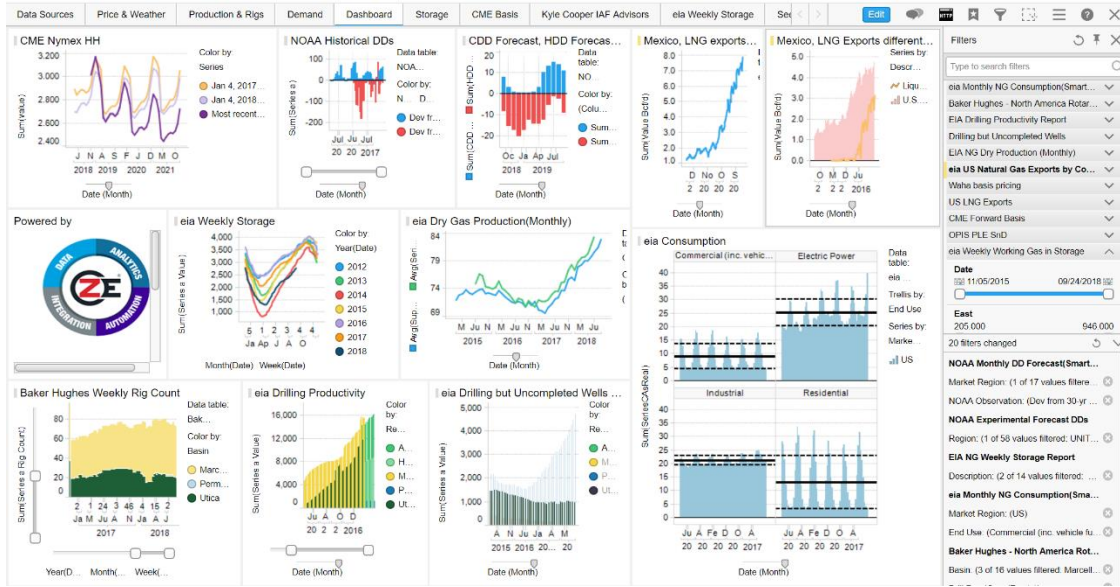
   ➢ Forward curves
   ➢ Physical basis (seasonality & basis)
   ➢ Storage Modeling
   ➢ Monthly pricing versus daily
   ➢ Value @ Risk

Spotfire Example: EIA Weekly Nat Gas Storage
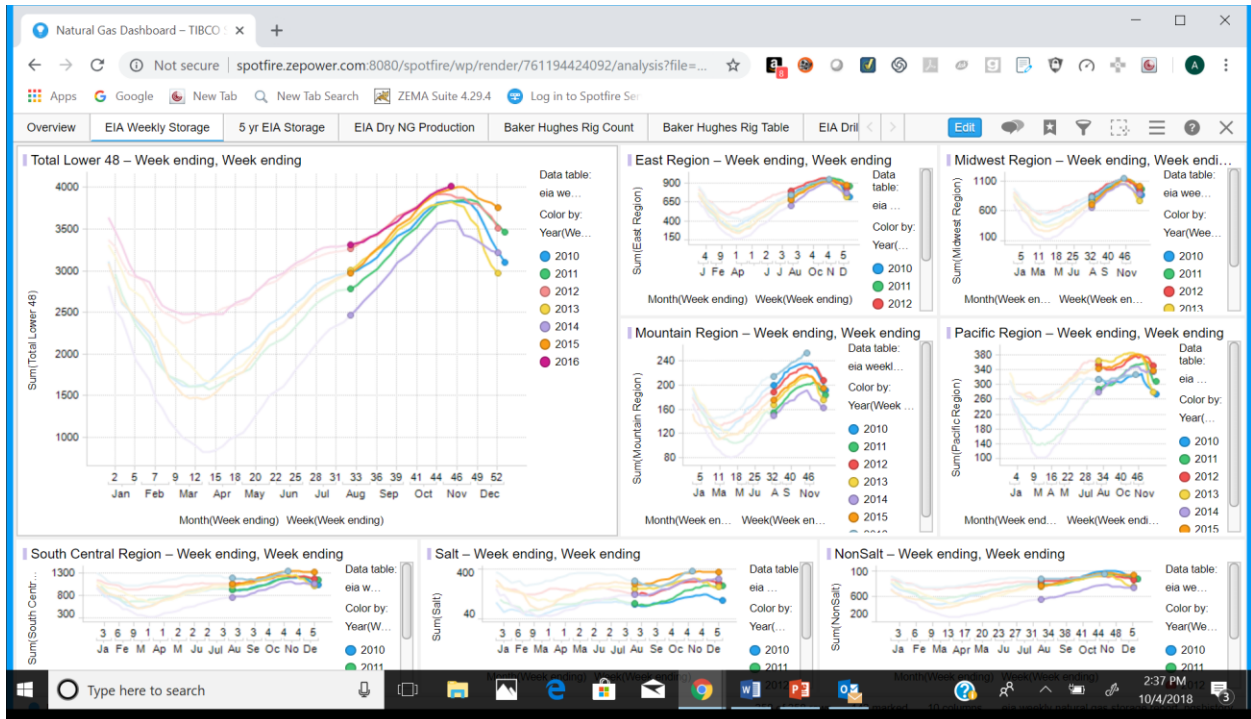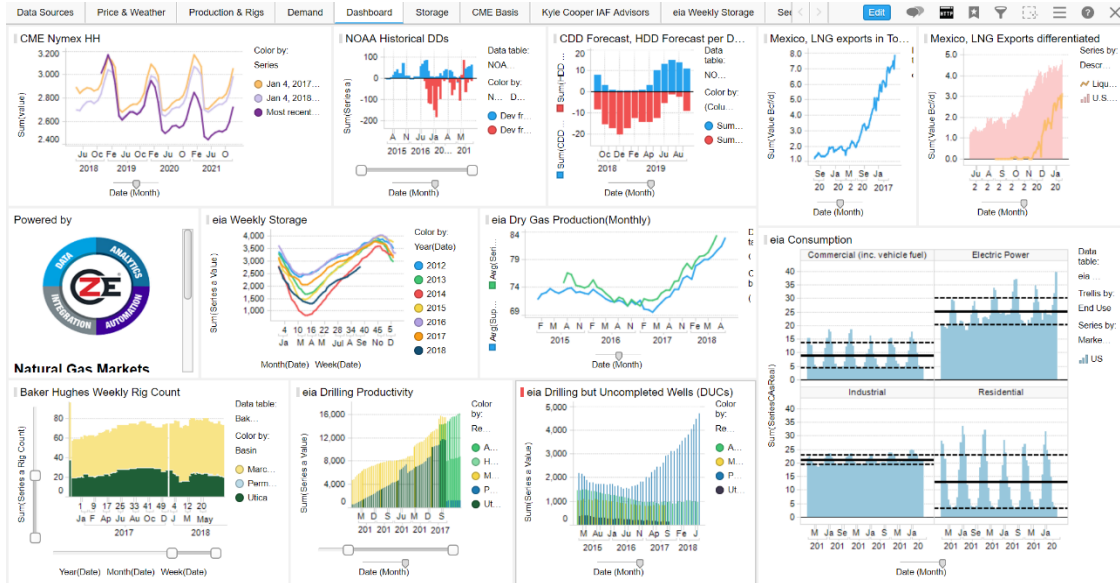
NatGas Dashboard

(with showing Filters to have an idea of the data brought in)

(without the Filters)

Crude Weekly Dashboard

Stocks