

## METHODOLOGY – PLATTS SPARK SPREADS

**Platts Spark Spreads** show the daily margin between the cost of input spot fuels and the price fetched by output electricity in 10 major U.S. electricity spot market hubs. **Platts Spark Spreads** are calculated for the fuels of importance in each market, using composite actual data on thermal efficiencies for generating plants located in that market.

Platts calculates one spread for each fuel based on the median generating efficiency (heat rate) for plants fired by that fuel within the hub, using rolling three-year historical data, as compiled by *Platts Utility Data Institute*, to calculate the median heat rate. Where warranted by actual historical use to meet peak demand within a hub, a second spread is calculated based on the least efficient quartile of generating plants for a given fuel, which represents the margin below which each market's most expensive (peaking) capacity operates.

A negative Spark Spread indicates generators should look to purchase power rather than using that fuel for generation, if the fuel is being purchased at current spot trading prices. Generators using fuel obtained under longer-term contracts can also use **Platts Spark Spreads** as indicators to hedge when the spot market provides more favorable fuel purchase options.

**Electricity** prices used are those cited for each hub in *Platts Energy Trader* for next day delivery (on Fridays, for Monday delivery).

Input fuels are priced in their respective spot markets at the nearest delivery term for which trading occurs:

- \* **Natural Gas:** next day for spot prices on key pipelines feeding the electricity hub, as cited in *Platts Energy Trader*. Specifics on each prices used for each hub:
  - New England: Average of Tennessee zone 6, Algonquin city-gate and Iroquois zone 2.
  - PJM: Average of Dominion and Texas Eastern zone M-3.
  - SERC: Average of: a) Transco zone 3 and b) Southern Natural plus a 25 cent transportation adder.
  - Cinergy: Average of: a) Columbia Gas and b) Texas Gas zone SL plus a 45 cent transportation adder.
  - Chicago: Chicago city-gate.
  - Entergy: Average of Reliant East and Henry Hub.
  - ERCOT (east): Houston Ship Channel.
  - Mid-Columbia: Northwest Canadian border.
  - North Path 15: Average of PG&E city-gate and PG&E Malin.
  - South Path 15: Southern California border.

\* **Oil:** spot cargoes for 1% sulfur residual HP at New York port for the East region and 0.7% sulfur residual fuel oil at Gulf Coast ports for the Central region, courtesy of *Platts Global Alert*, and

\* **Coal:** next month delivery in over-the-counter trading in NYMEX-spec Appalachian coal (12,000 Btu/lb, <1% sulfur) for the New England, PJM, SERC and Cinergy hubs and Powder River Basin 8,800 Btu/lb, 0.5% sulfur coal for Entergy, ComEd, ERCOT East, and Mid-Columbia hubs, courtesy of *Platts Coal Trader*.

\* **Transport adders:** Where it is relevant, the Platts editors have assessed a transport cost to the electricity hub, which is added to the fuel cost for natural gas, oil and coal. Transport costs are regularly reassessed by the respective fuel service editors.

**Nuclear fuel,** whose cost is amortized over the fuel's residence in the reactor (usually about five years), does not have a spot market but actual costs within a hub, averaged over three years like the composite heat rates, are provided by *Platts NuclearFuel* for comparative purposes where nuclear provides substantial baseload power in the markets.

In all cases except nuclear, each fuel's cost plus any applicable transport charge are converted to US dollars per million Btu, multiplied by the composite heat rate to produce a composite fuel cost per megawatt-hour, and subtracted from the day's spot electricity price to produce the spark spread. Nuclear fuel costs have been obtained on a US dollars/MWh basis and are subtracted directly from the spot electricity price.