

LBMP Global Power & Financial Consulting Inc.

Do it Right the first time!

Meet the new power industry standard application
Spot Market Simulator in a new era of electricity de-regulation

A right tool for the new era!

Many power market participants have been searching for a tool that can truly capture **both** the dynamics of the electricity spot market prices in the de-regulated market and the correct amount of power flow in the transmission network. They are very essential in predicting electricity market price behaviors (volatilities) due to a combination of three main factors:

Demand + Supply + Transmission.



***The search
is now
over!***

GPFC has it!

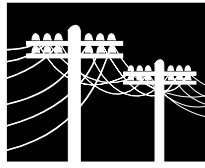
Most commercially available price-forecasting tools that are currently in the market do not possess the correct transmission models. As a result, the forecasted prices and flows do not reflect the actual market behaviors. Such are the cases because electricity cannot be stored in large quantity but has to be produced instantaneously, and hence transmission and congestion are what cause electricity prices behave so differently from other commodities' prices in the market place.

Global Power & Financial Consulting Inc. (GPFC Inc.)

specializes in providing sophisticated analytical applications to help power market participants tackle technical challenges and make commercial decisions in a monopolistic as well as de-regulation environment.

GPFC Inc. has a line of three complementary applications:

***Transmission Network module,
Hourly Spot Market Simulator module,
and Congestion Management module.***



The Transmission Network Module

models complicated power systems with proper flow through

a correct representation of an actual **electrical transmission network** and **flowgates** not a transportation model.

This transmission module provides a solid foundation for the **Hourly Spot Market Simulator** module used in simulating the impact on spot market clearing prices due to fuels costs, generation planned and forced outage schedule, weather (load uncertainty). It simulates both **Uniform Pricing & LMP** scheme based on both Bid/Ask strategies and generators' heat rates. It also has the hourly **dispatchable load** feature for dispatch and pricing.

Lastly, the **Congestion Management** module provides a means to examine the impact of:

(a) Local transmission congestion and its impact on anticipated generation dispatches & prices, and

(b) Inter-regional price differences due to transmission congestion among IMO and ISOs' imports & exports, and

(c) **Intertie Offer Guarantee (IOG)** as implemented by the IMO for Ontario.

The **local transmission congestion** feature of the tool provides the market participants with strategies to maximize the generation revenues with respect to system constraints and market rules.

The **interregional transmission congestion** feature provides a way to evaluate the financial transmission rights. This is especially critical for market participants who are active in multiple congruent regions and would like to exploit the opportunity to capture the market inefficiency or enhance the value of their energy by transferring power from a lower to a higher priced market.

GPFC Inc. also offers a wide range of specialized valuation studies of existing and new generating and transmission

Who can benefit from our products & services?

- Market operators such as **IMO** and **ISO** who need a reliable tool to forecast market prices based on supply and demand conditions, transmission limits, inter-regional transactions and market rules in real-time, short-term and long-term time frames.
- **Transmission company** who needs to evaluate the impact of new transmission line within and between control areas and to study the various performance-based tariffs to provide incentive for proper outage schedules as well as private-public ownership of new transmission facilities.
- **Generation company** that seeks to maximize the value of its generation output will need to analyze the inherent risks (weather, inflow, load, fuel costs, forced outages, etc.) and market rules impact in an open and competitive market.
- **Power Marketers** who need to understand the factors affecting market prices in next day, week, month and longer-term time frame.
- **Large commercial and industrial customers** who prefer to take advantage a proper percentage of the spot market exposure and fixed term contracts in order to minimize the financial impact of spot price volatility. This is prevalent with customers with high electricity consumption cost relative to its cost of goods sold.
- **Financial institutions** that are providing the financial evaluation of asset divestiture / acquisition.
- **Consulting companies** that need these specialized studies.

LBMP Global Power & Financial Consulting Inc.

GPFC offers:

Products: specialized power market applications to take on today's and tomorrow's challenges. Meet the **Spot Market Simulator (SMS) Suite** that includes:

- **Transmission Network module**
- **Hourly Spot Market Simulator**
- **Congestion Management module**



Services: energy price forecasting, specialized studies such as demand/supply adequacy study, local and interregional congestion analysis, TCC & transmission right valuation, market rule impact study, asset (divestiture and acquisition) valuation, performance-based transmission tariff, merchant DC transmission line impact (on both electricity prices and transmission right value) evaluations, DC line and phase-shifter modeling.

GPFC Inc. also offers consulting services to end-used clients whose primary business is not trading power but requires price forecast information either on a regular or on-off basis to make sound procurement decisions.

Portfolio Management & Trading Support:

- The only tool that truly models the transmission network and computes Locational Marginal Pricing (LMP), Zonal Pricing or Uniform Pricing.
- Analyze trading scenarios in Ontario and interconnected markets with up-to-date market rules and recommend options and strategies to maximize your company's profits from transactions.
- Capable of monitoring flowgates' flows across various markets and providing reliable information to trading staff for making informed trading decisions.
- Evaluate the value of Transmission Congestion Contract (TCC) for New York ISO Market and Financial Transmission Rights (FTR) as administered by Ontario IMO, PJM, and New England ISO.
- Analyze the impact of generation outages and transmission limits on prices.

For more information on our products and services, please contact us at

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www.globalpower-inc.com

Major Ontario IMO market participants are currently using our SMS Suite to conduct their businesses.

Market Rule and its Impact on Generating Assets:

- Asset valuation through zonal or nodal prices and transmission limits.
- Analyze the changes in market rules that could benefit the value of assets that your company owns or may acquire.
- Analyze the changes in market rules such as Inter-tie Offer Guarantee (IOG) that could have serious impact on electricity price

Superiority:

- Speed (less than 5 minutes to simulate market for a full month with hourly resolution),
- Accuracy (true transmission network modeling as opposed to transportation model), and proven track record with major market participants.
- Monte Carlo Simulation capability for price volatility study.



Easy and friendly excel user interface.

"No two words should ever give you greater sense of concern than any reference to 'financial genius.' It is a well-established form of insanity."

John Kenneth Galbraith

All you really need is the right tools with sound technologies