



Glossary

ABB Market Simulator model: The ABB (Asea Brown Boveri) Market Simulator computer production costing model was developed to predict the economic and physical performance of large power networks on an hourly basis. The application was designed to produce estimated market clearing prices that vary by location (bus or node), lowest-cost generating resource dispatch, and to identify transmission congestion. It illustrates system-wide effects of proposed transmission expansion and allows exploration of sensitivities.

ATC or Available Transfer Capability: A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above the capacity already committed to other uses.

BLM: The Bureau of Land Management is an agency within the U.S. Department of the Interior which administers federal public lands located primarily in 12 western states, including the RMATS states. The BLM can, based on a public interest standard, issue right-of-way grants for electrical generation, transmission and distribution systems under Title V of the Federal Land Policy and Management Act of 1976 (43 U.S.C. §§ 1761-1771). Visit the BLM at <http://www.blm.gov/nhp/index.htm>

“Bubbles”: For purposes of the RMATS study, areas in the RMATS regions were broken down into “bubbles” which summarize load and generation data for a particular geographic area. Building on similar bubbles used by SSG-WI, RMATS provides significant increases in granularity

Bus price: The price of a unit of electricity at the busbar of the plant at which it is produced.

CACRT: The Cost Assignment and Cost Recovery Team in RMATS. See a basic description of their work in the Report Appendices.

CCCT or Combined-Cycle Combustion Turbine: A generation unit which combines a natural gas-fueled combustion turbine with a steam turbine to produce electricity.

CFR The Code of Federal Regulations. It is the standard compilation of all federal agency regulations. References can be to either individual sections or Parts containing several sections on a single topic. Their numbering (e.g., 16 CFR) follows the numbering of titles in the United States Code.

DSM: Demand side management. Programs which seek to lower the demand for electricity, including, e.g., programs to shift loads off peak and to increase energy efficiency.

Enlibra Principles: A group of common principles developed by the WGA underlying the most promising approaches and successful solutions to environmental problems. Enlibra seeks greater participation and collaboration in decision-making, a focus on outcomes rather than just programs, and recognition of the need for a variety of tools beyond regulation that will improve environmental and natural resource management. Like RMATS, Enlibra recognizes that successful policy implementation is best accomplished through balanced, open and inclusive processes at the appropriate geographic level.

Enlibra is discussed at <http://www.westgov.org/wga/initiatives/enlibra/default.htm>
See WGA’s policy resolution at http://www.westgov.org/wga/policy/02/enlibra_07.pdf

IPP: The Intermountain Power Project includes a two-unit, coal-fired, steam electric generating station, with a net capacity of 1730 MW located in Delta, Utah. Learn more about IPP on the web at: <http://www.ipautah.com/aboutus.htm>

IRP: Integrated Resource Plan

LFWG: The Load Forecasting Work Group in RMATS. See a basic description of their work in the Report Appendices.

Locational Marginal Pricing or LMP: The locational marginal price expresses the cost of delivering the next MW (or other increment) of power to a particular location, or the savings from reducing load by 1 MW (or other increment) at that location (sometimes called a shadow price). LMP is used by RMATS for the sake of modeling convenience and uniformity in assessing the the ABB Market Simulator Model results by allowing the evaluation of pricing on a comparable basis throughout the RMATS region. For modeling purposes, it only expresses uniformly determined prices akin to those which might be found in a fully competitive market. The application of LMP in practice has generated some controversy (as an

element of standard market design. Our use of LMP should not be considered as a decision of RMATS to advocate the mandatory use of LMP in practice. For an expanded discussion of how to interpret the model outputs see the SSG-WI October 2003 report.

LSE: A load serving entity. One which provides electric service to retail customers.

MMBtu: One million British Thermal Units. Natural gas prices are often expressed in terms of MMBtus.

MW: A megawatt -- one million watts or 1,000 kilowatts.

Nodal pricing: Simply expressed as LMP at the node, nodal pricing is a method in which market clearing prices are calculated for a number of locations on the transmission grid (nodes). Each node represents a physical location on the transmission system, and it can include both generators and loads. The price at each node represents the locational value of energy, including the cost of the energy and the cost of delivering it (including losses and congestion). Nodal prices are determined by calculating the incremental cost of serving one additional MW of load at each location subject to system constraints (i.e. transmission limits, contingency analyses, etc.).

OATT: Open Access Transmission Tariffs. Developed under FERC Order 888 concerning the encouragement of competition in the wholesale electric transmission market.

Order 888: The FERC's Order 888 required all public utilities that own, control or operate interstate transmission facilities [a] to file nondiscriminatory open-access transmission tariffs with certain basic non-price terms and [b] to functionally unbundle wholesale power services from transmission services, which would require public utilities to [a] take wholesale transmission services under the same tariff as their customers; [b] state separate rates for wholesale generation, transmission, and ancillary services; and [c] use the same information network as their customers do to obtain information about the utilities' transmission systems.

Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities and Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs. ; 31,036 (1996), order on reh'g, Order No. 888-A, 62 Fed. Reg. 12,274 (March 14, 1997), FERC Stats. & Regs. 31,048 (1997), order on reh'g, Order No. 888-B, 81 FERC , 61,248 (1997), order on reh'g, Order No. 888-C, 82 FERC 61,046 (1998), aff'd in relevant part, remanded in part on other grounds sub nom. *Transmission Access Policy Study Group, et al. v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), aff'd sub nom. *New York v. FERC*, 122 S. Ct. 1012 (2002).

Order 889: The FERC's Order 889, issued concurrently with Order 888, imposed standards of conduct governing communications between a utility's transmission and wholesale power functions, preventing the utility from giving its power marketing arm preferential access to transmission information. All public utilities that own, control or operate interstate transmission facilities must also create or participate in an electronic information system (OASIS) that provides current and potential transmission customers the same access to transmission information, enabling them to obtain discriminatory open-access non-transmission service.

Open Access Same-Time Information System and Standards of Conduct, Order No. 889, 61 Fed. Reg. 21,737 (April 24 1996), FERC Stats. & Regs. ¶ 31,035 at 31,588-91 (1996), order on reh'g, Order No. 889-A, 62 Fed. Reg. 12,484 (March 4, 1997), FERC Stats. & Regs. ¶ 31,049 (1997).

RAWG: The Resource Additions Work Group in RMATS. See a basic description of their work in the Report Appendices.

RMATS: The Rocky Mountain Area Transmission Study. It brings together concerned stakeholders from Utah, Wyoming, Montana, Idaho, and Colorado to examine and understand better the electric transmission needs of the 5-state region and to recommend the most necessary and financially viable projects to enhance transmission infrastructure. Visit RMATS at <http://psc.state.wy.us/htdocs/subregional/home.htm>

ROIWG: The Regulatory and Operational Issues Work Group in RMATS, charged with addressing opportunities for more efficient use of the existing transmission system, going beyond economic modeling and dealing with issues of intermittent resources (wind power), tariffs and other pertinent topics.

RTO or Regional Transmission Organization: Developed conceptually in orders of the Federal Energy Regulatory Commission as entities which would provide comprehensive management of the nation's electric transmission system, RTOs are intended to increase transmission efficiency, eliminate bottlenecks, facilitate the development of competitive wholesale markets and provide governance in the rational development and use of transmission assets in the future.

Series Compensation: A series capacitor installed on a transmission line generates reactive power that balances a portion of the line's transfer reactance. It is intended to improve the functionality of the transmission system, including [a] improved voltage stability of the corridor and [b] optimized power sharing between parallel circuits.

SSG-WI or Seams Steering Group-Western Interconnection: SSG-WI serves as a discussion forum for facilitating the creation of a seamless Western electricity market and for proposing resolutions for issues associated with differences in RTO practices and procedures. The member RTOs includes WestConnect, the California ISO and Grid West (formerly RTO WEST). Representatives of RTOs, utilities, consumers, regulators and other groups participate in the SSG-WI process. Visit SSG-WI at <http://www.ssg-wi.com/>

TAWG: The Transmission Additions Work Group in RMATS. See a basic description of their work in the Report Appendices.

USC The United States Code. The official reference to codified federal statutes. A sample citation -- 16 USC § 470 -- denotes "Title 16 of the United States Code, Section 470."

VOM: Variable Operating and Maintenance Cost As used in the RMATS study, the ABB Market Simulator dispatches new and existing generation based on the lowest variable operating and maintenance cost of the generating units.

WAPA: The Western Area Power Administration. WAPA markets and delivers hydroelectric power and related services within a 15-state region of the central and western United States, including all of the RMATS states except Idaho. It is one of four power marketing administrations (or PMAs) within the United States. Department of Energy which market and transmit electricity from multi-use water projects. WAPA's system carries electricity from 55 hydropower plants operated by the Bureau of Reclamation, U.S. Army Corps of Engineers and the International Boundary and Water Commission. Western accepts requests from electric utilities, firm-power customers, private power developers, and independent power generators to interconnect with its transmission system Visit WAPA at <http://www.wapa.gov/>

WECC: The Western Electricity Coordinating Council is the regional reliability council covering the entire Western Interconnection. It is one of 11 regional reliability councils in North America. WECC focuses on ensuring the reliability of the western grid. It was formed in April 2002, by the merger of Western Systems Coordinating Council, Southwest Regional Transmission Association (SWRTA), and Western Regional Transmission Association (WRTA). Visit WECC at <http://www.wecc.biz/main.html>

Western Interconnection: The Western Interconnection is the electric power transmission system currently existing in all or part of 14 western states, two Canadian Provinces and a portion of northern Mexico. Private and public entities developed the interconnected system organically to serve the needs of their own load bases but did so in consideration of enhancing system reliability and efficiency. It is virtually a self-contained network and is characterized by some stability (e.g., loop flow) and transfer limitations (e.g., path congestion) stemming from its physical makeup and the very long transmission lines which characterize it.

WGA or Western Governors' Association: WGA serves the Governors of 21 states and US-Flag Pacific Islands, including Alaska, American Samoa, Arizona, California, Colorado, Guam, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Northern Mariana Islands, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. It works on policy, social and governance issues in the West, serves as a voice for the West in the federal system, and promotes shared development of solutions to regional problems. A center for innovation, WGA develops policy and carries out programs in the areas of natural resources, the environment, human services, economic development, international relations and state governance. Visit WGA at <http://www.westgov.org/>