## Appendix B

# LIST OF ACRONYMS

AZ-NM-SNV	Arizona-New Mexico-Southern Nevada (NERC subregion, see map in Appendix A)	ISDA	International Swaps and Derivatives Association
Bcf	Billion cubic feet	ISO	Independent system operator
Bcfd	Billion cubic feet per day	ISO-NE	ISO New England (see map in Appendix A)
Btu	British thermal unit	kW	Kilowatt
CAISO	California ISO (see map in Appendix A)	kWh	Kilowatt-hour
CCRO	Committee of Chief Risk Officers	LDC	Local distribution company
CERA	Cambridge Energy Research Associates	LMP	Locational marginal pricing
CL&P	Connecticut Light & Power	LNG	Liquefied natural gas
CSEM	Center for the Study of Energy Markets	MAAC	Mid-Atlantic Area Council (NERC region,
ECAR	East Central Area Reliability Council (NERC		geographically within PJM)
	region, see map in Appendix A)	MAIN	Mid-America Interconnected Network Inc. (NERC region, see map in Appendix A)
EEI	Edison Electric Institute	MAPP	Mid-Continent Area Power Pool (NERC
EIA	Energy Information Administration	WALL	region, see map in Appendix A)
ERCOT	Electric Reliability Council of Texas (NERC region)	MMBtu	Million British thermal units
FERC	Federal Energy Regulatory Commission	MMcfd	Million cubic feet per day
FGT	Florida Gas Transmission	MW	Megawatt
FRCC	Florida Reliability Coordinating Council	MWh	Megawatt-hour
	(NERC region, see map in Appendix A)	NAESB	North American Energy Standards Board
GW	Gigawatt	NARUC	National Association of Regulatory Utility
ICE	IntercontinentalExchange		Commissioners

NEM National Energy Marketers Association VACAR

**NEPOOL** New England Power Pool

**NERC** North American Electric Reliability Council

NPCC Northeast Power Coordinating Council

(NERC region that geographically includes

ISO-NE and NYISO)

**NWPP** Northwest Power Pool (NERC subregion, see

map in Appendix A)

NY New York

**NYISO** New York Independent System Operator

Nymex New York Mercantile Exchange

**NYSERDA** New York State Energy Research and

**Development Authority** 

**0&M** Operations and maintenance

**OMOI** Office of Market Oversight and

Investigations (FERC)

PJM PJM Interconnection (see map in Appendix

A)

PRL Price-responsive load

**PUC** Public utility commission

**RMPA** Rocky Mountain Power Area (NERC subre-

gion, see map in Appendix A)

**RTEP** Regional Transmission Expansion Plan

**RTO** Regional transmission organization

**SERC** Southeastern Electric Reliability Council

(NERC region including Entergy, Southern, TVA and VACAR; see map in Appendix A)

**SPP** Southwest Power Pool Inc. (NERC region,

see map in Appendix A)

**Tcf** Trillion cubic feet

TLR Transmission loading relief

**TOU** Time-of-use

TVA Tennessee Valley Authority (NERC subre-

gion, see map in Appendix A)

**US** United States

**USC** United States Code

**VACAR** Virginia-Carolinas area (NERC subregion,

see map in Appendix A)

**WECC** Western Electricity Coordinating Council

(NERC region, see map in Appendix A)

**WUMS** Wisconsin Upper Michigan System (see map

in Appendix A)

## **Appendix C**

## GLOSSARY

- **12-month strip** refers to the prices for the next 12 months of consecutive natural gas futures trading contracts, usually starting with the nearest, or prompt, month.
- In electric markets a *baseline* refers to an agreed-upon level of electricity consumption from which deviations are measured. Baselines are usually based on a customer's historical usage. The variation in usage from the baseline may be billed at a different rate.
- **Basis** refers to the difference in prices between identical products but in two different markets; in this report it refers to different geographical natural gas markets.
- **Bid-ask differential** is the difference in price between what a buyer offers to pay for a commodity and what a seller offers to accept for a commodity.
- Capacity markets exist to ensure that power is available when it is needed; a capacity market requires companies with an obligation to deliver electricity to customers to pay power plant owners for having their units up and running and able to produce additional energy.
- Combined-cycle generators increase the efficiency of electric generation by capturing and reusing waste heat; the latest units achieve heat rates near 6,000 Btu/kWh with more than 50 percent fuel-to-electricity conversion efficiency.

- Credit clearing is a mechanism for settling mutual claims, the result of which is that the risk that a specific company might fail to fulfill its contract is substantially reduced by pooling among many companies.
- **Critical notices** provide information on conditions that affect natural gas scheduling or adversely affect scheduled gas flow.
- *Curtailable load* is subject to interruption by the grid operator.
- **Day-ahead markets** are forward markets for electricity to be supplied the following day. This market closes with acceptance by the independent system operator, power exchange or scheduling coordinator of the final day-ahead schedule.
- **Demand responsiveness/demand response** occurs when customers respond to an increase in price by lowering demand for a good or service and respond to a decrease in price by increasing demand for a good or service.
- Dispatch declines refer to the 16 categories for which a generator may decline a dispatch instruction in CAISO's automated dispatch system, e.g., safety, unit derating or environmental constraints. If an automated dispatch instruction is not responded to within two minutes, it is considered declined.

- A dual-fueled (or dual-fired) unit is a generating unit that can produce electricity using two or more fuels. In some of these units, only the primary fuel can be used continuously; the alternate fuel(s) can be used only as a start-up fuel or in emergencies.
- **Financial liquidity** generally describes an entity's ability to obtain funds to meet its cash flow obligations, with consideration for the speed with which such funds can be obtained.
- Financial transmission right entitles the holder to receive compensation (or pay) for certain transmission charges that arise when the grid is congested and differences in locational prices result from the redispatch of generators to relieve that congestion.
- **Firm** transportation or deliveries are guaranteed not to be interrupted.
- A forward price curve is the chronological set of prices determined by a market for a good that will be delivered in the future.
- **Fuel-adjustment clause** is a provision of a power sales agreement or rate schedule that allows for the electricity price to be changed based on changes in the price of the fuel used to generate the power.
- **Hedging** is a risk management tool used to protect the value of an investment or contractual commitment from the risk of loss due to price fluctuations.
- Independent system operator (ISO) is an organization that has been granted the authority to operate, in a nondiscriminatory manner, the transmission assets of the participating transmission owners in a fixed geographic area. ISOs often run organized markets for spot electricity.
- Demand is *inelastic* if customers do not change their demand in response to a change in price.
- Injection season refers to the April 1 through October 31 period, during which gas is injected into natural gas storage reservoirs in preparation for withdrawal and use during the winter heating season.

- Interruptible or nonfirm customers hold transmission service that is reserved and scheduled on an as-available basis and is contractually subject to curtailment or interruption.
- *Intertie* refers to the point of physical interconnection between adjacent transmission systems.
- **Load**, which is often synonymously used with demand, is the total amount of power carried by an electric system per unit of time.
- Load pockets are areas isolated by the limits of the transmission network to get power to them; demand within the load pocket exceeds internal generation, so imports are needed or reliability will fail.
- **Locational marginal price** is the market-clearing price for electricity at the location the energy is delivered or received.
- Loop flow refers to the fact that electricity flows on transmission lines in accord with the laws of physics and not on the route contracted for by the seller. In some areas, system configuration is such that electricity flows in large cross-regional loops, as around the Great Lakes area of southern Canada.
- An electric generating unit is *on the margin/the marginal unit* if it is the last unit turned on in an area to serve load. In organized wholesale markets, the price of the marginal source of electricity usually sets the price for all generation within the market.
- **Margin requirement** is the amount of money required to hold futures contracts and cover changes in the value of futures contracts.
- **Market capitalization** measures company market value and is computed as stock market price per share of stock times the total number of shares outstanding.
- **Market liquidity** describes the ease with which a buyer can buy or a seller can sell at a prevailing price in a marketplace.
- Market power can include, but is not limited to, the ability of a firm to raise its price or withhold its output with the effect of raising market prices above competitive levels for a sustained period of time.

- **Project financing** is a form of asset-based financing in which a firm finances a discrete set of assets (the project) on a stand-alone basis.
- Real-time markets are electric markets that settle
  or, determine the price for one-hour periods or less during the day of delivery.
- **Real-time pricing** provides signals to customers on the value of consuming energy at the time of consumption.
- Regional transmission organization (RTO) is an organization with some similar roles to an independent system operator (ISO) but covering a larger geographical scale and involved in both operation and planning of the transmission system. RTOs often run organized markets for spot electricity.
- **Ring-fencing** refers to techniques used to isolate the credit risk of a subsidiary within a corporation from the risk of its affiliated companies.
- **Seams** are barriers and inefficiencies between regions resulting from equipment limitations and differences in market rules and designs, operating and scheduling protocols and other control-area practices that inhibit or preclude the ability to transact capacity and energy.
- **Single settlement system** is a market that provides only a real-time market.
- Spot market is the natural gas market for contractual commitments that are short-term (usually a month or less) and that begin in the near future (often the next day, or within days). In electricity, spot markets are usually organized markets for day-ahead and real-time electricity run by an independent system operator or regional transmission organization.
- **Time-of-use pricing** is a rate design imposing higher charges to customers during periods of the day when higher demand is experienced.
- Transmission loading relief (TLR) refers to a situation called when electricity flows exceed permitted levels; a TLR is called to preserve the reliability of the electric transmission system. A TLR interrupts specific transmission flows or transactions and may curtail service to specific customers or future transmission schedules.

- **Volatility** is a measurement of the price fluctuation of a commodity that takes place over a certain period of time.
- Winter heating season refers to the November 1 through March 31 period, during which most natural gas use for space heating takes place.

### **Appendix D**

# FERC Energy Market Participant Index

#### Electric Distributors

CenterPoint Energy

Central Vermont Public Service

Consolidated Edison Inc.

Green Mountain Power Corp.

Maine Public Service Co.

NSTAR

Pepco Holdings Inc.

Sempra Energy

UIL Holdings Corp.

#### Electric Generators

AES Corp.

Calpine Corp.

Mirant Corp.

Reliant Resources Inc.

#### Utility Parent Companies with Significant Wholesale Exposure

American Electric Power (AEP)

Allegheny Energy Inc.

Aquila Inc.

CMS Energy Corp.

Constellation Energy Group

DPL Inc.

**Duke Energy** 

Dynegy Inc.

**Edison International** 

Exelon Corp.

FirstEnergy Corp.

Northeast Utilities

PG&E Corp.

Pinnacle West Capital

PPL Corp.

Public Service Enterprise Group Inc. (PSEG)

TECO Energy Inc.

TXU Corp.

Westar Energy Inc.

Xcel Energy Inc.

#### Utility Parent Companies with Minimal Wholesale Exposure

Ameren Corp.

Avista Corp.

**CH Energy Group** 

Dominion Resources Inc.

DQE Inc.

Energy East Corp.

**FPL Group** 

MDU Resources Group

NiSource Inc.

Wisconsin Energy Corp.

#### **►** Gas Distributors

AGL Resources Inc.

Atmos Energy Corp.

Cascade Natural Gas Corp.

Chesapeake Utilities Corp.

Energen Corp.

EnergySouth Inc.

Equitable Resources Inc.

KeySpan Corp.

Laclede Group

New Jersey Resources Corp.

Nicor Inc.

Northwest Natural Gas Co.

NUI Corp.

ONEOK Inc.

**Peoples Energy** 

Piedmont Natural Gas Co.

SEMCO Energy Inc.

South Jersey Industries Inc.

Southern Union Co.

Southwest Gas Corp.

Southwestern Energy Co.

UGI Corp.

Vectren Corp.

WGL Holdings Inc.

#### ► Mid-stream Gas

El Paso Corp.

Enbridge Inc.

Kinder Morgan Inc.

National Fuel Gas Co.

Questar Corp.

TransCanada Corp.

The Williams Cos. Inc.

#### ► Integrated Electric

Alliant Energy Corp.

Cinergy Corp.

Cleco Corp.

DTE Energy Co.

El Paso Electric

Empire District Electric Co.

Great Plains Energy Inc.

MGE Energy Inc.

OGE Energy Corp.

Otter Tail Corp.

PNM Resources Inc.

**Progress Energy** 

Puget Energy Inc.

SCANA Corp.

Sierra Pacific Resources

Southern Co.

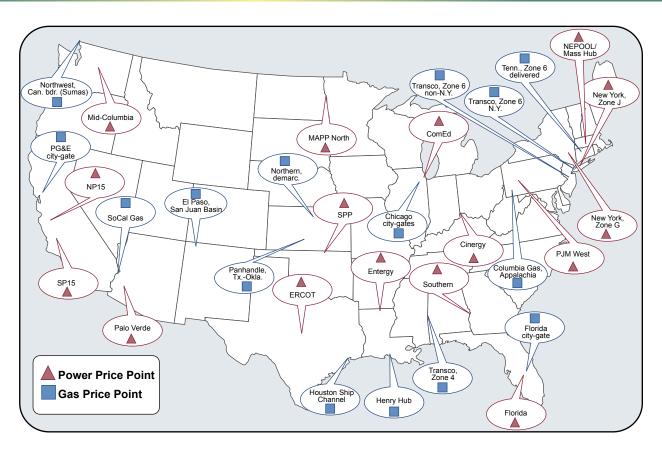
UniSource Energy Corp.

Unitil Corp.

WPS Resources Corp.

**Appendix E** 

# SELECTED NATURAL GAS AND ELECTRICITY PRICE POINTS



Sources: Megawatt Daily and Gas Daily.

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Any errors are the responsibility of OMOI alone.

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