

## KEY DEFINITIONS AND ACRONYMS

# Key Definitions and Acronyms

Abbreviation	Meaning
ACQ	annual contract quantities
AECO	gas hub in Alberta, Canada
AFUDC	allowance for funds used during construction
AGC	automatic generation control
AIM	Area Investment Model, used to calculate financial performance indicators for projects
AMR	Automated Meter Reading
aMW	The average number of megawatt-hours (MWh) over a specified time period; for example, 295,650 MWh generated over the course of one year equals 810 aMW (295,650/8,760 hours).
ANOPR	advance notice of proposed rulemaking
ASM	ancillary service model
ATC	available transmission capacity
AURORA	One of the two models PSE uses for integrated resource planning, which uses the western power market to produce hourly electricity price forecasts of potential future market conditions
BA	Balancing Authority, the area operator that matches generation with load
BACT	best available control technology (required of new power plants and those with major modifications)
BcF	billion cubic feet
BEF	Bonneville Environmental Foundation
BOP	balance of plant (work inclusive of project substations, turbine foundations, collection system, roads and the operations and main building)
BPA	Bonneville Power Administration
CAISO	California Independent System Operator
CAMR	clean air mercury rule (requires that coal plants reduce at least 30% of their mercury emissions by 2010, and at least 70% by 2018)
CATR	clean air transport rule (owned by the EPA)
CCCT	combined cycle combustion turbines (see Appendix D)
CCS	carbon capture and sequestration
CCX	Chicago Climate Exchange
CDD	Contract Daily Demand
CDEAC	Clean and Diversified Energy Advisory Committee formed by the WGA to identify incentive-based, non-mandatory recommendations that would facilitate 30,000 megawatts of new clean and diverse energy by 2015, a 20% increase in energy efficiency by 2020 and adequate transmission for the region)
CFB	circulating fluidized bed (see FB)

## KEY DEFINITIONS AND ACRONYMS

Abbreviation	Meaning
CHP	combined heat and power plant (a more efficient use of non-renewable generation units because the CHP unit captures waste heat and uses it)
C/I	commercial/industrial
CLX	PSE's customer service information system
COE	U.S. Army Corps of Engineers
COL	construction and operating license
CNG	compressed natural gas
CPUC	California Public Utility Commission
CRAG	Conservation Resource Advisory Group
C&RD	BPA's conservation and renewables discount
CRO	contingency reserve obligation
CTED	Washington State Department of Community, Trade & Economic Development
CVR	conservation voltage reduction
DER	distributed energy resources
DETM	Duke Energy Trading and Marketing
DG	distributed generation. Small modular, decentralized, grid-connected or off-grid energy systems located near where energy is used
DIMP	Distribution integrity management program implemented by the Pipeline and Hazardous Materials Safety Administration
DOE	Department of Energy
DP	distributed power
DR	demand response (see Appendix D)
DR	district regulators
DSM	Demand Side Management
DSO	dispatch standing order (BPA's protocol to manage a growing amount of wind on its system)
EA	environmental assessment
EC	engineering consulting firms retained by PSE to determine resource cost and performance assumptions
EFP	exchange for physical
EIA	U.S. Energy Information Agency
EITF	Emerging Issues Task Force (see Appendix F, section B)
EO	Executive Order (of Governor Christine Gregoire outlining goals for addressing climate change)
EPA	Energy Policy Act
EPA	Environmental Protection Agency
EPC	engineer, procure and construct
EPRI	Electric Power Research Institute
ERO	Electric Reliability Organization
ESP	electrostatic precipitator
EV	expected value (see Appendix J, section B)
FASB	Financial Accounting Standards Boards (see Appendix F, section B)
FB	fluidized bed (technology that mixes coal and an inert bed material such as sand in a combustor or boiler)

## KEY DEFINITIONS AND ACRONYMS

Abbreviation	Meaning
FEED	Front End Engineering Design (a study to develop the design envelope for IGCC; see IGCC section in Appendix D)
FEIR	Final Environmental Impact Report (filed by Cape Wind offshore wind farm)
FERC	Federal Energy Regulatory Commission
FF	fabric filter
GCM	general circulation models
GDP	gross domestic product
GHG	greenhouse gas
GP	Georgia Pacific
GTG	gas turbine generator (see CCTC section of Appendix D)
GTN	Gas Transmission Northwest
HAP	hazardous air pollutants
HC	Hadley Centre (model used to calculate hydro availability change)
HDD	heating degree days
HELM	Hourly electric load model (used to develop a 2002 demand profile, which was replaced by PSE's hourly load profile of electric demand). See Appendix H, section 3.
HP	high-pressure
HRSG	heat recovery steam generator (see CCCT section of Appendix D)
HVAC	heating, ventilation and air conditioning
I-937	Washington state's renewable portfolio standard (RPS), a citizen-based initiative codified as RCW 19.285, aka. the Energy Independence Act
ICNU	Industrial Customers of Northwest Utilities
iDOT	Investment Optimization Tool to identify a set of projects that will create maximum value
IEEE	Institute of Electric and Electronic Engineers
IGCC	integrated gasification combined cycle (generally refers to a model in which syngas from a gasifier fuels a combustion turbine to produce electricity, while the combustion turbine compressor compresses air for use in the production of oxygen for the gasifier)
IP	intermediate pressure
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent power producers
IRP	Integrated Resource Plan
IRPAG	Integrated Resource Plan Advisory Group
ISO	independent system operator
JISAO	Joint Institute for the Study of Atmosphere & Ocean
JP	Jackson Prairie
KWh	kilowatt hours
LCP	least cost plan (IRP)
LCPAG	Least Cost Plan Advisory Group (IRPAG)
LDC	local distribution company
LFG	landfill gas

## KEY DEFINITIONS AND ACRONYMS

Abbreviation	Meaning
LNP	liquefied natural gas
LOLP	loss of load probability
LP	linear program (see Appendix J, section A)
LP-Air	vaporized propane air
L/R Bal	load/resource balance (demand/availability)
MACT	maximum achievable control technology (emissions rate limitations for coal-fired units)
MCFC	molten carbonate fuel cells
MDQ	maximum daily quantity
MEPA	Massachusetts Environmental Policy Act
MPI	Max Plank Institute Model
MSW	municipal solid waste
MUST	Managing & Utilizing System Transmission
MW	megawatt
MWh	megawatt hours
NAAQS	National Ambient Air Quality Standards (set by the EPA, which enforces the Clean Air Act, for six criteria pollutants: sulfur oxides, nitrogen dioxide, particulate matter, ozone, carbon monoxide and lead)
NARUC	National Association of Regulatory Utility Commissions
NAS	National Academy of Sciences
NCEP	National Commission on Energy Policy
NEEA	Northwest Energy Efficiency Alliance
NERC	North American Electric Reliability Council
NGCC	natural gas combined cycle
NOS	Network Open Season, a BPA transmission planning process
NPCC	Northwest Power and Conservation Council
NPP	nuclear power plant (a thermal power station in which the heat source is one or more nuclear reactors)
NRDC	National Resources Defense Council
NREL	National Renewables Energy Laboratories
NSPS	new source performance standards (new plants and those with major modifications must meet these EPA standards before receiving permit to begin construction)
NTAC	Northwest Transmission Assessment Committee (established in 2003 to approach transmission issues from a perspective influenced by both commercial and reliability needs)
NUG	nonutility generator
NWIGU	Northwest Industrial Gas Users
NWP	Northwest Pipeline (only pipeline directly to west WA)
NWPCC	Northwest Power Planning & Conservation Council
NWPP	Northwest Power Pool
NWS	BPA's None-wire Solutions Roundtable
NYMEX	New York Mercantile Exchange
OASIS	Open Access Same-Time Information System
OC	owner's cost
OPS	Office of Pipeline Safety
OSU	Oregon State University

## KEY DEFINITIONS AND ACRONYMS

Abbreviation	Meaning
P	probability
PAFC	phosphoric acid fuel cells
PBA	power bridging agreement (designates PPAs that bridge the period until long-lead resources or transmission can be developed)
PC	pulverized coal (technology that grounds coal into fine powder that is mixed with air and blown into the boiler furnace to be burned)
PCA	power cost adjustment (electric)
PCORC	power cost only rate case
PEFA	ColumbiaGrid's planning and expansion functional agreement, which defines obligations under its planning and expansion program
PEM	proton exchange membrane fuel cells
PFBC	pressurized fluid bed combustion (the boiler uses FB technology at elevated operating pressures to produce heat for steam production and pressurized gas to drive a gas turbine)
PGA	purchased gas adjustment
PG&E	Pacific Gas & Electric
PGE	Portland Gas Electric
PGSS	peak gas supply service
PHMSA	Pipeline & Hazardous Materials Safety Administration
PM	particulate matter
portfolio	specific mix of generic power resources
PPA	purchased power agreement (a bilateral wholesale or retail power short term or long term contract, wherein power is sold at either a fixed or variable price and delivered to an agreed-upon point).
PPM	parts per million
PSE	Puget Sound Energy
PSIA	Pipeline Safety Improvement Act
PSIG	pounds per square inch gauge
PSM	portfolio screening model (one of the two models PSE uses for integrated resource planning, which tests electric supply and demand portfolios to evaluate PSE's long-term revenue requirements for incremental portfolio)
PTC	production tax credit
PTI	Power Technologies, Inc.
PUD	public utility district
PV	photovoltaic
RCW 19.285	Washington state's renewable portfolio standard (RPS), aka. the Energy Independence Act
REAP	Renewable Energy Advantage Program
REC	renewable energy credit
RFP	request for proposal
RGGI	Regional Greenhouse Gas Initiative; a cooperative effort between northeast states mandating electric utility emissions reductions

## KEY DEFINITIONS AND ACRONYMS

Abbreviation	Meaning
RMATS	Rocky Mountain Area Transmission Study (see Appendix E)
RPS	renewable portfolio standard (mandates 3% renewables by 2012, 9% by 2016 and 15% by 2020) )
RTO	regional transmission organization
SCADA	supervisory control and data acquisition
SCCT	Simple cycle combustion turbine (see Appendix D, section C)
scenario	consistent set of data assumptions to define a specific future; takes holistic approach to uncertainty analysis
SCGT	simple cycle gas turbines
SCPC	super critical pulverized coal (see PC)
SENDOUT	PSE's model used to help identify the long-term least cost combination of gas resources to meet stated loads.
SOFC	solid oxide fuel cells
STG	steam turbine generator (see Appendix D)
TCPL-Alberta	TransCanada's Alberta System
TCPL-British Columbia	TransCanada's British Columbia System
TCWG	Transmission Coordination Work Group, a WECC committee of project sponsors whose purpose is to coordinate planning studies and project communications
T&D	transmission and distribution
TGC	total dissolved gas
TIG	Transmission Issues Group
TRC	total resource cost
UCPC	ultra critical pulverized coal (see PC)
UPC	use per customer
USEIA	U.S. Energy Information Agency
VectorGas	facilitates the ability to model price and load uncertainty
WCI	Western Climate Initiative
WCSB	Western Canadian Sedimentary Basin
WECC	Western Electric Coordinating Council
WGA	Western Governors' Association (see Appendix E)
WOMR	West of McNary Reinforcement, a proposed transmission project
WUTC	Washington Utilities and Transportation Commission