

Power reference — Energy Atlas

Generated 2026-09-29 · power data generated 2026-09-29 · 5,099 plants, 19,246 line segments, 80 regions, 29 interties, 24 price points, 78 contracts (as of 2026-09-29). Figures are approximate — a learning aid, not trading data.

Grid operators

OPERATOR	COUNTRY	MARKET	MAPPED MW	PLANTS	TOP FUELS (MW)
Alberta Electric System Operator	CA	Organized market (ISO/RTO)	12,077	32	coal 6,425, gas 4,492, hydro 587
Independent Electricity System Operator (Ontario)	CA	Organized market (ISO/RTO)	32,374	65	nuclear 13,594, gas 8,360, hydro 6,948
CENACE (Mexico's national grid operator)	MX	Organized market (ISO/RTO)	61,918	132	gas 27,924, oil 12,691, hydro 11,252
California ISO	US	Organized market (ISO/RTO)	81,694	566	gas 31,491, solar 22,224, hydro 8,632
Electric Reliability Council of Texas	US	Organized market (ISO/RTO)	142,618	485	gas 56,820, wind 36,959, solar 21,821
ISO New England	US	Organized market (ISO/RTO)	30,307	160	gas 14,336, oil 5,618, nuclear 3,354
Midcontinent ISO	US	Organized market (ISO/RTO)	189,122	722	gas 85,748, coal 45,040, wind 24,255
New York ISO	US	Organized market (ISO/RTO)	37,642	164	gas 22,516, hydro 3,884, nuclear 3,330
PJM Interconnection	US	Organized market (ISO/RTO)	203,179	586	gas 97,042, coal 37,718, nuclear 34,721
Southwest Power Pool	US	Organized market (ISO/RTO)	113,588	510	wind 48,978, gas 32,637, coal 22,547
BC Hydro	CA	Vertically integrated	15,579	28	hydro 13,549, gas 1,345, wind 573
Hydro-Québec	CA	Vertically integrated	42,375	73	hydro 38,895, wind 2,562, gas 918
Manitoba Hydro	CA	Vertically integrated	5,704	13	hydro 4,935, gas 510, wind 258
NB Power (incl. Prince Edward Island)	CA	Vertically integrated	3,825	9	oil 1,478, hydro 780, nuclear 660
Newfoundland and Labrador Hydro	CA	Vertically integrated	7,003	6	hydro 6,513, oil 490
Nova Scotia Power	CA	Vertically integrated	2,186	8	coal 1,252, gas 500, hydro 200
SaskPower	CA	Vertically integrated	4,022	13	coal 1,530, gas 1,502, hydro 841
Arizona Public Service	US	Vertically integrated	6,753	38	solar 2,962, gas 2,290, wind 844
Bonneville Power Administration	US	Vertically integrated	12,630	16	hydro 10,232, gas 1,934, wind 464
Los Angeles Department of Water and Power	US	Vertically integrated	2,542	15	gas 2,348, other 140, biomass 53

OPERATOR	COUNTRY	MARKET	MAPPED MW	PLANTS	TOP FUELS (MW)
NorthWestern Energy (Montana)	US	Vertically integrated	3,289	14	coal 1,625, hydro 1,053, wind 344
Salt River Project	US	Vertically integrated	13,712	35	gas 6,400, nuclear 3,937, solar 2,610

Canada & Mexico capacity is from NACEI (August 2017, plants ≥100 MW) and is out of date in places — e.g. Alberta's coal units have since converted to gas or retired (coal phase-out completed 2024). US capacity is from EIA (see Data sources for dates). Totals count only plants mapped to each outline.

Interties

INTERTIE	FROM	TO	TYPE	MW	STATUS
BC Hydro–BPA (Path 3 / Northwest–British Columbia Intertie)	BC Hydro	Bonneville Power Administration	AC	3,150	in service
AESO–BC Hydro (BC–Alberta Intertie)	Alberta Electric System Operator	BC Hydro	AC	1,200	in service
Montana–Alberta Tie Line (MATL)	NorthWestern Energy (Montana)	Alberta Electric System Operator	AC	300	in service
McNeill HVDC Back-to-Back (Alberta–Saskatchewan Intertie)	Alberta Electric System Operator	SaskPower	DC	150	in service
SaskPower–Manitoba Hydro Intertie	SaskPower	Manitoba Hydro	AC	315	in service
Great Northern Transmission Line (Manitoba Hydro–MISO)	Manitoba Hydro	Midcontinent ISO	AC	883	in service
Ontario–Manitoba Interconnection	Independent Electricity System Operator (Ontario)	Manitoba Hydro	AC	250	in service
Ontario–Michigan Interconnection (IESO–MISO)	Independent Electricity System Operator (Ontario)	Midcontinent ISO	AC	1,650	in service
Ontario–Minnesota Interconnection (IESO–MISO)	Independent Electricity System Operator (Ontario)	Midcontinent ISO	AC	150	in service
Ontario–New York Interconnection at Niagara	Independent Electricity System Operator (Ontario)	New York ISO	AC	2,150	in service
Ontario–New York Interconnection at St. Lawrence	Independent Electricity System Operator (Ontario)	New York ISO	AC	475	in service
Ontario–Quebec Interconnection (IESO–Hydro-Québec)	Independent Electricity System Operator (Ontario)	Hydro-Québec	AC	2,330	in service
Châteauguay HVDC (Hydro-Québec–NYISO)	Hydro-Québec	New York ISO	DC	1,000	in service
Champlain Hudson Power Express (Hydro-Québec–NYISO)	Hydro-Québec	New York ISO	DC	1,250	in service
Hydro-Québec Phase I/II HVDC (Hydro-Québec–ISO-NE)	Hydro-Québec	ISO New England	DC	2,000	in service
New England Clean Energy Connect (NECEC)	Hydro-Québec	ISO New England	DC	1,200	in service
Highgate HVDC (Hydro-Québec–ISO-NE via Vermont)	Hydro-Québec	ISO New England	DC	217	in service
NB Power–ISO-NE Interconnection	NB Power (incl. Prince Edward Island)	ISO New England	AC	1,000	in service

INTERTIE	FROM	TO	TYPE	MW	STATUS
Madawaska HVDC (Hydro-Québec–NB Power)	Hydro-Québec	NB Power (incl. Prince Edward Island)	DC	350	in service
Eel River HVDC (Hydro-Québec–NB Power)	Hydro-Québec	NB Power (incl. Prince Edward Island)	DC	320	in service
Nova Scotia Power–NB Power Intertie	Nova Scotia Power	NB Power (incl. Prince Edward Island)	AC	505	in service
Maritime Link (NL Hydro–Nova Scotia Power)	Newfoundland and Labrador Hydro	Nova Scotia Power	DC	500	in service
ERCOT–SPP DC Ties	Electric Reliability Council of Texas	Southwest Power Pool	DC	820	in service
ERCOT–CENACE DC Ties	Electric Reliability Council of Texas	CENACE (Mexico's national grid operator)	DC	400	in service
Pacific DC Intertie (BPA–LADWP)	Bonneville Power Administration	Los Angeles Department of Water and Power	DC	3,100	in service
California-Oregon Intertie / Pacific AC Intertie (Path 66, BPA–CAISO)	Bonneville Power Administration	California ISO	AC	4,800	in service
Neptune Cable (PJM–NYISO)	PJM Interconnection	New York ISO	DC	660	in service
Linden VFT (PJM–NYISO)	PJM Interconnection	New York ISO	DC	300	in service
Hudson Transmission Project (PJM–NYISO)	PJM Interconnection	New York ISO	DC	660	in service

Price points and contracts

PRICE POINT	REGION	CONTRACTS	VENUES	LOAD SHAPES
PJM Western Hub	PJM Interconnection	14	CME, ICE, Nodal	Off-peak (wrap), Peak 5x16
PJM Eastern Hub	PJM Interconnection	1	CME	Peak 5x16
PJM ComEd Zone	PJM Interconnection	4	CME, ICE	Off-peak (wrap), Peak 5x16
PJM AD Hub (AEP-Dayton Hub)	PJM Interconnection	2	CME, ICE	Peak 5x16
ERCOT North 345kV Hub	Electric Reliability Council of Texas	10	CME, ICE, Nodal	Off-peak (wrap), Peak 5x16
ERCOT Houston 345kV Hub	Electric Reliability Council of Texas	2	CME	Off-peak (wrap), Peak 5x16
ERCOT South 345kV Hub	Electric Reliability Council of Texas	1	CME	Peak 5x16
ERCOT West 345kV Hub	Electric Reliability Council of Texas	1	CME	Peak 5x16
MISO Indiana Hub (Cinergy)	Midcontinent ISO	3	CME, ICE	Off-peak (wrap), Peak 5x16
MISO Michigan Hub	Midcontinent ISO	2	CME	Off-peak (wrap), Peak 5x16
NYISO Zone A (West)	New York ISO	2	CME, ICE	Peak 5x16
NYISO Zone C (Central)	New York ISO	1	CME	Peak 5x16
NYISO Zone E (Mohawk Valley)	New York ISO	1	CME	Off-peak (wrap)

PRICE POINT	REGION	CONTRACTS	VENUES	LOAD SHAPES
NYISO Zone G (Hudson Valley)	New York ISO	2	CME	Off-peak (wrap), Peak 5x16
NYISO Zone J (NYC)	New York ISO	2	CME	Off-peak (wrap), Peak 5x16
ISO-NE Mass Hub	ISO New England	3	CME	Off-peak (wrap), Peak 5x16
ISO-NE W Central Massachusetts Zone	ISO New England	1	CME	Peak 5x16
CAISO NP-15 EZ Gen Hub	California ISO	3	CME, ICE	Peak 6x16
CAISO SP-15 EZ Gen Hub	California ISO	4	CME	Off-peak (wrap), Peak 6x16
Mid-Columbia (Mid-C)	Bonneville Power Administration	5	ICE, Nodal	Peak 6x16
Palo Verde	Salt River Project	2	CME, ICE	Off-peak (wrap), Peak 6x16
SPP South Hub	Southwest Power Pool	1	ICE	Peak 5x16
Alberta Power Pool (AESO)	Alberta Electric System Operator	9	CME, NGX	Around the clock, Off-peak (wrap), Off-peak 7x8, Other, Peak 6x16, Peak 7x16
Ontario (IESO) System	Independent Electricity System Operator (Ontario)	2	CME	Off-peak (wrap), Peak 5x16

CONTRACT	VENUE	CODE	SHAPE	INDEX	TENORS	SIZE	IB ACCESS	SPEC CHECKED
PJM Western Hub Day-Ahead Peak Calendar-Month 5 MW LMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
PJM Western Hub Day-Ahead Off-Peak Calendar-Month 5 MW LMP Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
PJM Western Hub Real-Time Peak Calendar-Month 5 MW LMP Swap Futures	CME		Peak 5x16	real-time	monthly	5 MW	unverified	search results
PJM Western Hub Real-Time Off-Peak Calendar-Day 25 MW LMP Swap Futures	CME		Off-peak (wrap)	real-time	daily	25 MW	unverified	search results
PJM Western Hub Real-Time Peak Calendar-Day 5 MW LMP Swap Futures	CME		Peak 5x16	real-time	daily	5 MW	unverified	search results
PJM ComEd Zone Day-Ahead Peak Calendar-Month 5 MW LMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
PJM ComEd Zone Day-Ahead Off-Peak Calendar-Month 5 MW LMP Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
PJM Eastern Hub Day-Ahead Peak Calendar-Month 5 MW LMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
PJM DAY (AD Hub) Day-Ahead Peak Monthly 1 MW Futures	CME		Peak 5x16	day-ahead	monthly	1 MW	unverified	search results
ERCOT North 345kV Hub Day-Ahead Peak Calendar-Month 5 MW Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
ERCOT North 345kV Hub Day-Ahead Off-Peak Calendar-Month 5 MW Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
ERCOT North 345kV Hub Real-Time Peak Calendar-Month 5 MW Swap Futures	CME		Peak 5x16	real-time	monthly	5 MW	unverified	search results
ERCOT North 345kV Hub Real-Time Off-Peak Calendar-Month 5 MW Swap Futures	CME		Off-peak (wrap)	real-time	monthly	5 MW	unverified	search results
ERCOT Houston 345kV Hub Day-Ahead Off-Peak Calendar-Month 5 MW Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
ERCOT Houston 345kV Hub Real-Time Peak Calendar-Day 50 MW Futures (800 MWh/day)	CME		Peak 5x16	real-time	daily	50 MW	unverified	search results

CONTRACT	VENUE	CODE	SHAPE	INDEX	TENORS	SIZE	IB ACCESS	SPEC CHECKED
ERCOT South 345kV Hub Day-Ahead Peak Calendar-Month 5 MW Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
ERCOT West 345kV Hub Day-Ahead Peak Calendar-Month 5 MW Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
MISO Indiana Hub (Cinergy) Day-Ahead Off-Peak Calendar-Month 5 MW Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
MISO Michigan Hub Day-Ahead Peak Calendar-Month 5 MW Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
MISO Michigan Hub Day-Ahead Off-Peak Calendar-Month 5 MW Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
ISO New England Mass Hub Day-Ahead Peak Calendar-Day 5 MW LMP Swap Futures	CME		Peak 5x16	day-ahead	daily	5 MW	unverified	search results
ISO New England Mass Hub Peak Calendar-Month Day-Ahead LMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
ISO New England Mass Hub Off-Peak Calendar-Month Day-Ahead LMP Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
ISO New England W Central Massachusetts Zone Peak Calendar-Month Day-Ahead Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
NYISO Zone A Day-Ahead Peak Calendar-Day LBMP Swap Futures	CME		Peak 5x16	day-ahead	daily	5 MW	unverified	search results
NYISO Zone C Peak Calendar-Month Day-Ahead LBMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
NYISO Zone E Off-Peak Calendar-Month Day-Ahead LBMP Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
NYISO Zone G Day-Ahead Peak Calendar-Month LBMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
NYISO Zone G Day-Ahead Off-Peak Calendar-Month LBMP Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
NYISO Zone J Day-Ahead Peak Calendar-Month LBMP Swap Futures	CME		Peak 5x16	day-ahead	monthly	5 MW	unverified	search results
NYISO Zone J Day-Ahead Off-Peak Calendar-Month LBMP Swap Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results
CAISO NP15 EZ Gen Hub Peak Calendar-Month Real-Time LMP Swap Futures	CME		Peak 6x16	real-time	monthly	5 MW	unverified	search results
CAISO NP15 EZ Gen Hub Peak Calendar-Day Real-Time LMP Swap Futures	CME		Peak 6x16	real-time	daily	5 MW	unverified	search results
CAISO SP15 EZ Gen Hub Peak Calendar-Month Real-Time LMP Swap Futures	CME		Peak 6x16	real-time	monthly	5 MW	unverified	search results
CAISO SP15 EZ Gen Hub Peak Calendar-Month Day-Ahead LMP Swap Futures	CME		Peak 6x16	day-ahead	monthly	5 MW	unverified	search results
CAISO SP15 EZ Gen Hub Off-Peak Calendar-Day Real-Time LMP Swap Futures	CME		Off-peak (wrap)	real-time	daily	5 MW	unverified	search results
CAISO SP15 EZ Gen Hub Off-Peak Calendar-Day Day-Ahead LMP Swap Futures	CME		Off-peak (wrap)	day-ahead	daily	5 MW	unverified	search results
Palo Verde Day-Ahead Off-Peak Calendar-Month 5 MW Futures	CME		Off-peak (wrap)	day-ahead	monthly	5 MW	unverified	search results

CONTRACT	VENUE	CODE	SHAPE	INDEX	TENORS	SIZE	IB ACCESS	SPEC CHECKED
Alberta Power Pool Peak Calendar-Month Swap Futures	CME		Peak 6x16	real-time	monthly		unverified	search results
Alberta Power Pool Extended Peak Calendar-Month Swap Futures	CME		Peak 7x16	real-time	monthly		unverified	search results
Alberta Power Pool Extended Peak Calendar-Day Swap Futures	CME		Peak 7x16	real-time	daily		unverified	search results
Ontario Peak Calendar-Month Swap Futures	CME		Peak 5x16	real-time	monthly		unverified	search results
Ontario Off-Peak Calendar-Month Swap Futures	CME		Off-peak (wrap)	real-time	monthly		unverified	search results
PJM Western Hub Real-Time Peak (1 MW) Fixed Price Future	ICE	PMI	Peak 5x16	real-time	monthly	1 MW	unverified	search results
PJM Western Hub Real-Time Peak (50 MW) Fixed Price Future	ICE		Peak 5x16	real-time	monthly	50 MW	unverified	search results
PJM Western Hub Day-Ahead Peak Fixed Price Future	ICE	PJC	Peak 5x16	day-ahead	monthly	1 MW	unverified	live page
Weekly Average Price on PJM Western Hub Real-Time Peak Fixed Price Future	ICE		Peak 5x16	real-time	weekly	1 MW	unverified	search results
Average Price Option on PJM Western Hub Day-Ahead Peak (1 MW) Fixed Price Future	ICE		Peak 5x16	day-ahead	monthly	1 MW	unverified	search results
Average Price Option on PJM Western Hub Real-Time Peak (1 MW) Fixed Price Future	ICE		Peak 5x16	real-time	monthly	1 MW	unverified	search results
PJM ComEd Zone Day-Ahead Peak Fixed Price Future	ICE	CEP	Peak 5x16	day-ahead	monthly	1 MW	unverified	live page
PJM ComEd Zone Day-Ahead Peak Daily Fixed Price Future	ICE		Peak 5x16	day-ahead	daily	1 MW	unverified	search results
PJM Day Day-Ahead Peak Fixed Price Future	ICE	DCP	Peak 5x16	day-ahead	monthly	1 MW	unverified	live page
ERCOT North 345KV Real-Time Peak Fixed Price Future	ICE	ERN	Peak 5x16	real-time	monthly	1 MW	unverified	live page
ERCOT North 345KV Real-Time Peak Daily Fixed Price Future	ICE		Peak 5x16	real-time	daily	1 MW	unverified	search results
ERCOT North 345KV Real-Time Off-Peak Daily Fixed Price Future	ICE		Off-peak (wrap)	real-time	daily	1 MW	unverified	search results
ERCOT North 345KV Day-Ahead Off-Peak Fixed Price Future	ICE		Off-peak (wrap)	day-ahead	monthly	1 MW	unverified	search results
ERCOT North 345KV Hub Day-Ahead Off-Peak Daily Fixed Price Future	ICE		Off-peak (wrap)	day-ahead	daily	1 MW	unverified	search results
MISO Indiana Hub Day-Ahead Peak Fixed Price Future	ICE	MCC	Peak 5x16	day-ahead	monthly	1 MW	unverified	live page
MISO Indiana Hub Real-Time Peak Fixed Price Future	ICE		Peak 5x16	real-time	monthly	1 MW	unverified	search results
NYISO Zone A Day-Ahead Peak Fixed Price Future	ICE	NAY	Peak 5x16	day-ahead	monthly	1 MW	unverified	live page
Mid-Columbia Day-Ahead Peak Fixed Price Future	ICE	MDC	Peak 6x16	day-ahead	monthly	1 MW	unverified	live page
Mid-Columbia Day-Ahead Peak Daily Fixed Price Future	ICE		Peak 6x16	day-ahead	daily	1 MW	unverified	search results

CONTRACT	VENUE	CODE	SHAPE	INDEX	TENORS	SIZE	IB ACCESS	SPEC CHECKED
Mid-Columbia Day-Ahead Peak Daily Mini Fixed Price Future	ICE		Peak 6x16	day-ahead	daily		unverified	search results
Option on Mid-Columbia Day-Ahead Peak Fixed Price Future	ICE		Peak 6x16	day-ahead	monthly	1 MW	unverified	search results
Palo Verde Day-Ahead Peak Fixed Price Future	ICE	PVM	Peak 6x16	day-ahead	monthly	1 MW	unverified	live page
CAISO NP-15 Day-Ahead Peak Fixed Price Future	ICE	NPM	Peak 6x16	day-ahead	monthly	1 MW	unverified	live page
SPP South Hub Day-Ahead Peak Fixed Price Future	ICE	FSP	Peak 5x16	day-ahead	monthly	1 MW	unverified	live page
PJM Western Hub Monthly Real-Time On-Peak Power Future	Nodal	FKE	Peak 5x16	real-time	monthly	1 MW	unverified	live page
PJM Western Hub Monthly Real-Time Off-Peak Power Future	Nodal	FKF	Off-peak (wrap)	real-time	monthly	1 MW	unverified	live page
ERCOT HB_NORTH Monthly Real-Time On-Peak Power Future	Nodal		Peak 5x16	real-time	monthly		unverified	search results
PJM Western Hub Calendar Year Real-Time Off-Peak Power Future	Nodal		Off-peak (wrap)	real-time	calendar		unverified	search results
Mid-C Monthly Day-Ahead On-Peak Power Option	Nodal		Peak 6x16	day-ahead	monthly		unverified	search results
ICE NGX AESO Financial Flat Fixed Price	NGX	XCU	Around the clock	real-time	monthly	5 MW	unverified	live page
ICE NGX AESO Financial Peak Fixed Price	NGX	XCV	Peak 6x16	real-time	monthly	5 MW	unverified	live page
ICE NGX AESO Financial Extended Peak Fixed Price	NGX	XCX	Peak 7x16	real-time	monthly	5 MW	unverified	live page
ICE NGX AESO Financial Super Peak Fixed Price	NGX	XCY	Other	real-time	monthly	5 MW	unverified	live page
ICE NGX AESO Financial Off-Peak Fixed Price	NGX	XCW	Off-peak (wrap)	real-time	monthly	5 MW	unverified	live page
ICE NGX AESO Financial Extended Off-Peak Fixed Price	NGX	XCZ	Off-peak 7x8	real-time	monthly	5 MW	unverified	live page

“Search results” means the contract spec was built from search results because the exchange page could not be fetched; CME rows have not been checked against CME's 2026 delisting notices and may include contracts no longer listed. IB access is unverified unless marked.

Data sources

SOURCE	RETRIEVED	LICENCE
EIA operable power plants ≥20 MW	2026-09-26	US Government data (EIA); hosted by Esri Federal User Community
NACEI power plants ≥100 MW, Canada and Mexico (Aug 2017)	2026-09-26	Free and unrestricted use; credit North American Cooperation on Energy Information (NACEI)
HIFLD electric transmission lines ≥230 kV (archive; data to 2024-09-30)	2026-09-26	US Government data (HIFLD); hosted by Esri Federal User Community
OpenStreetMap power lines ≥230 kV, Canada	2026-09-26	ODbL 1.0 — © OpenStreetMap contributors

SOURCE	RETRIEVED	LICENCE
OpenStreetMap power lines ≥ 230 kV, Mexico	2026-09-26	ODbL 1.0 — © OpenStreetMap contributors
HIFLD control areas (balancing authorities), SeerAI archive, 2025-11-17	2026-09-26	CC BY 4.0 — SeerAI (HIFLD archive)
Natural Earth admin boundaries (provinces, Mexico)		Public domain

Glossary

ISO / RTO

Independent System Operator / Regional Transmission Organization: runs the grid and the wholesale market in its footprint (PJM, MISO, ERCOT, SPP, CAISO, NYISO, ISO-NE; AESO and IESO in Canada).

Balancing authority

The entity that keeps supply and demand in balance in an area; outside ISOs this is usually a utility.

Locational marginal price (LMP)

The price at a grid node: energy + congestion + losses, set by the last plant needed to serve load there.

Trading hub / zone

An average of many nodes used as a reference price for contracts.

Day-ahead vs real-time

Day-ahead prices clear the day before delivery; real-time prices clear every 5 minutes (hourly in some markets).

Peak 5x16

Weekdays, hours ending 7–22 (Eastern markets). Peak 6x16 adds Saturday (Western markets). Peak 7x16 is every day.

Off-peak (wrap)

All hours outside the peak block: weekday nights plus weekends. 2x16 = weekend daytime; 7x8 = every night.

Around the clock (ATC)

All 24 hours, every day.

Financial vs physical settlement

Financially settled contracts pay the difference to a published price in cash; physical contracts deliver power.

Open interest

The number of contracts outstanding — a measure of how liquid a contract is.

Spark spread

Power price minus heat rate $\times$ gas price: the gross margin of a gas-fired plant.

Heat rate

Fuel needed per MWh of electricity (MMBtu/MWh); lower is more efficient (modern combined cycle ≈ 6.5 – 7.5).

Energy-only vs capacity market

Energy-only markets (ERCOT, Alberta) pay only for energy, so scarcity shows up as price spikes; capacity markets (PJM, ISO-NE, NYISO, MISO) also pay for availability.

Intertie / HVDC

A link between two grids; HVDC ties move power between unsynchronized grids with controllable flow.