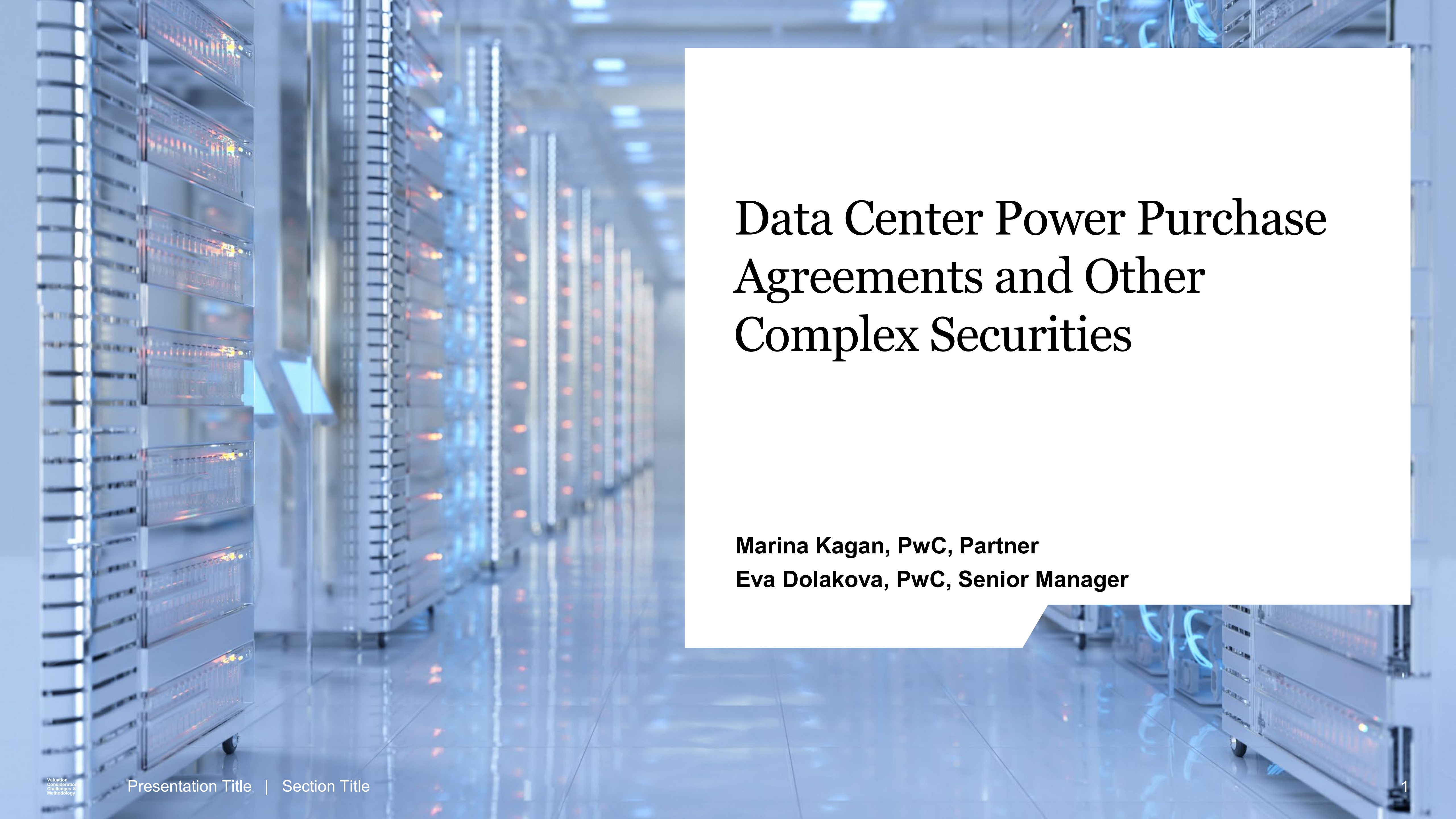

Data Center Power Purchase Agreements and Other Complex Securities

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SECTION I

Data Center (“DC”) Power Demand & Contract Complexity

AI data center scale drives high capacity demand

Hyperscale demand

300 MW - 1GW+ per campus – routinely exceeds existing regional grid capacity

Common solutions

Conventional energy is increasingly chosen for its scale and firm capacity.

New-build generation and recommissioning retired power plants

Scale in Context: 1GW as % of Regional Peak Load:

Region	Total Peak Load	1GW = % of peak
PJM Dominion (Virginia)	~24 GW	~4%
MISO LZ4 (N. Illinois)	~20 GWs	~5%
ERCOT North	~20 -25 GWs	~4–5%
Typical utility in Pacific Northwest	~8GWs	~12–15%

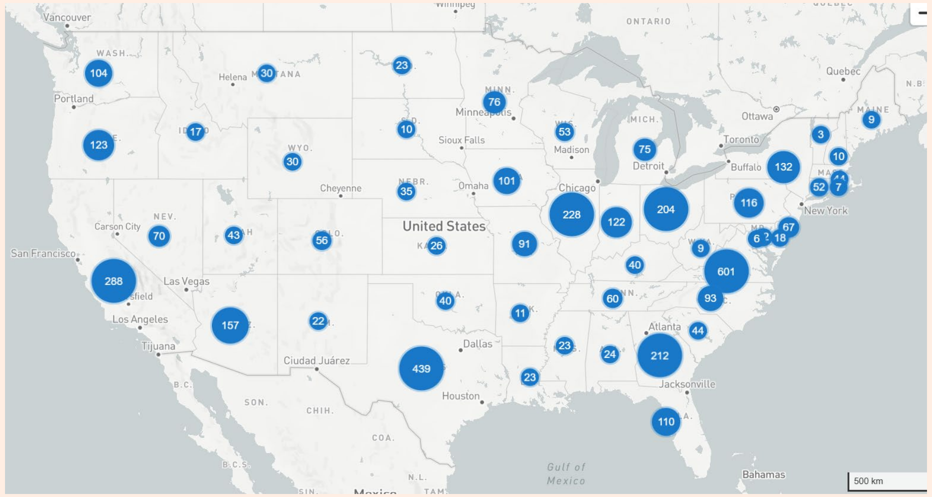
Regional pathways vary by ISO/Utility

Data centers span PJM, MISO, ERCOT, CAISO and regulated utilities. Capacity expansion depends on local jurisdiction rules.

Region type	Contract structure	Key feature
Organized wholesale markets (PJM, MISO, ERCOT, CAISO)	Bilateral PPAs Heat rate contracts	DC contracts directly with generator/developer
Utility zone – built capacity	Special tariff plus PPA with utility	Utility develops dedicated generation; DC pays capital investment plus production cost
Utility zone – source from outside	Special tariff with utility sourcing from third party of ISO	Utility procures supply via ISO capacity market participation or third-party PPAs. Sleeve to DC. Plus, recovery through tariff an investment into transmission.

USA Data Centers

As of May 2026



Source: Data Center Map

PRICING

Incremental demand pushes prices above market benchmarks

Transaction prices consistently above market benchmarks

New-build PPA prices: 2x+ multiple of existing fleet economics

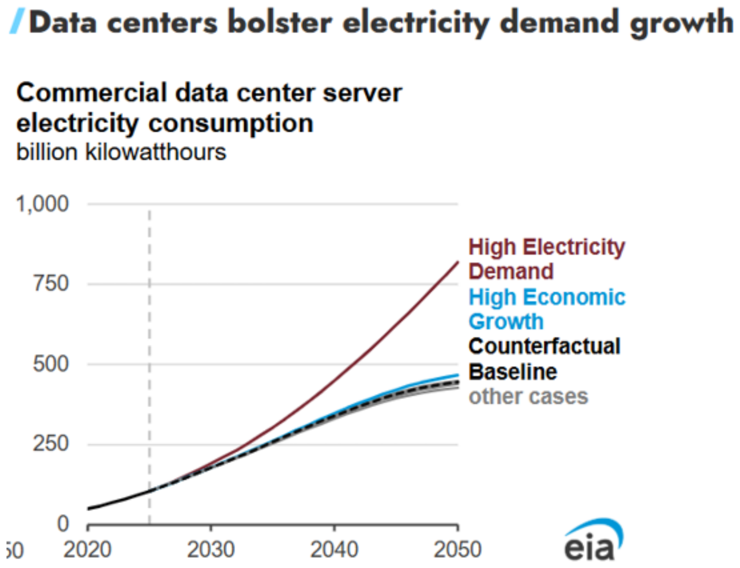
Additional upward pressure

AI race accelerating demand · Supply-chain shortage (turbines, transformers) · Developer risk priced-in

Recent observations

Contract price at level of $80-120/MWh vs market benchmark of $40-60/MWh

PJM capacity prices at a historic high: $333/MW-day compared to historical $50-100/MW-day · MISO - similar upward pressure



Data source: U.S. Energy Information Administration, *Annual Energy Outlook 2026*, April 2026

Fixed vs variable load

Traditional end-user contracts use variable "as required" quantities — scoped out of derivative accounting (no notional). DC contracts use fixed load commitments + imbalance settlement, which triggers derivative accounting via net settlement provisions.

Feature	Traditional end-consumer contract	Typical DC Contracts
Contract quantity	As required consumption	Minimum capacity & load commitment
Imbalance mechanism	Utility absorb variances over the load forecast	Net settlement provisions: • Resell energy • Release capacity
Ramp-up Timeline	Not applicable	Construction risk (delays, reverse demand)
Termination	Symmetrical or regulated	One-sided: DC pays termination fees

CONTRACT COMPLEXITY

Multi-product retail service

DC contracts operate as retail-type service, requiring simultaneous procurement of multiple products, each with distinct price, volatility, and liquidity characteristics.

Capacity

Firm supply security.

Structurally complex under regulated utilities (e.g., WECC, WRAP).

Electricity

Volumetric energy risk.

Pricing exposed to real-time and forward market dynamics.

RECs

State renewable requirements.

DC sources tends to use conventional firm generation (gas, nuclear, hydro) — generating environmental attributes that may NOT qualify as RECs, and do not currently have an observable market.

Some companies have renewable energy supply commitments and require RECs

SECTION II

Valuation and Accounting Considerations

Typical DC contract at a glance

SIZE

300 MWs –1GWs per site

Hyperscaler campuses often exceed 1 GW

TENOR

15–20 years

Driven by financing cycle

PRODUCTS

Capacity + Electricity + RECs

RECs or other environmental attributes included where applicable

QUANTITY

Fixed min. load commitment + imbalance regulation

Due to variable load profile, ramp-up timeline

ENERGY PRICE

Fixed or index-based formula

Pass-through transmission & other costs

CAPACITY PRICE

Separate fixed price

Often cannot be bifurcated from energy for accounting purposes

Key accounting considerations under ASC 815

Traditional retail contracts were viewed as requirement contracts, exempt from ASC 815 derivative accounting. DC contracts break the exemption.

Imbalance Settlement + Notional → Derivative Designation

Imbalance provisions can be viewed as net settlement, triggering derivative designation under ASC 815.

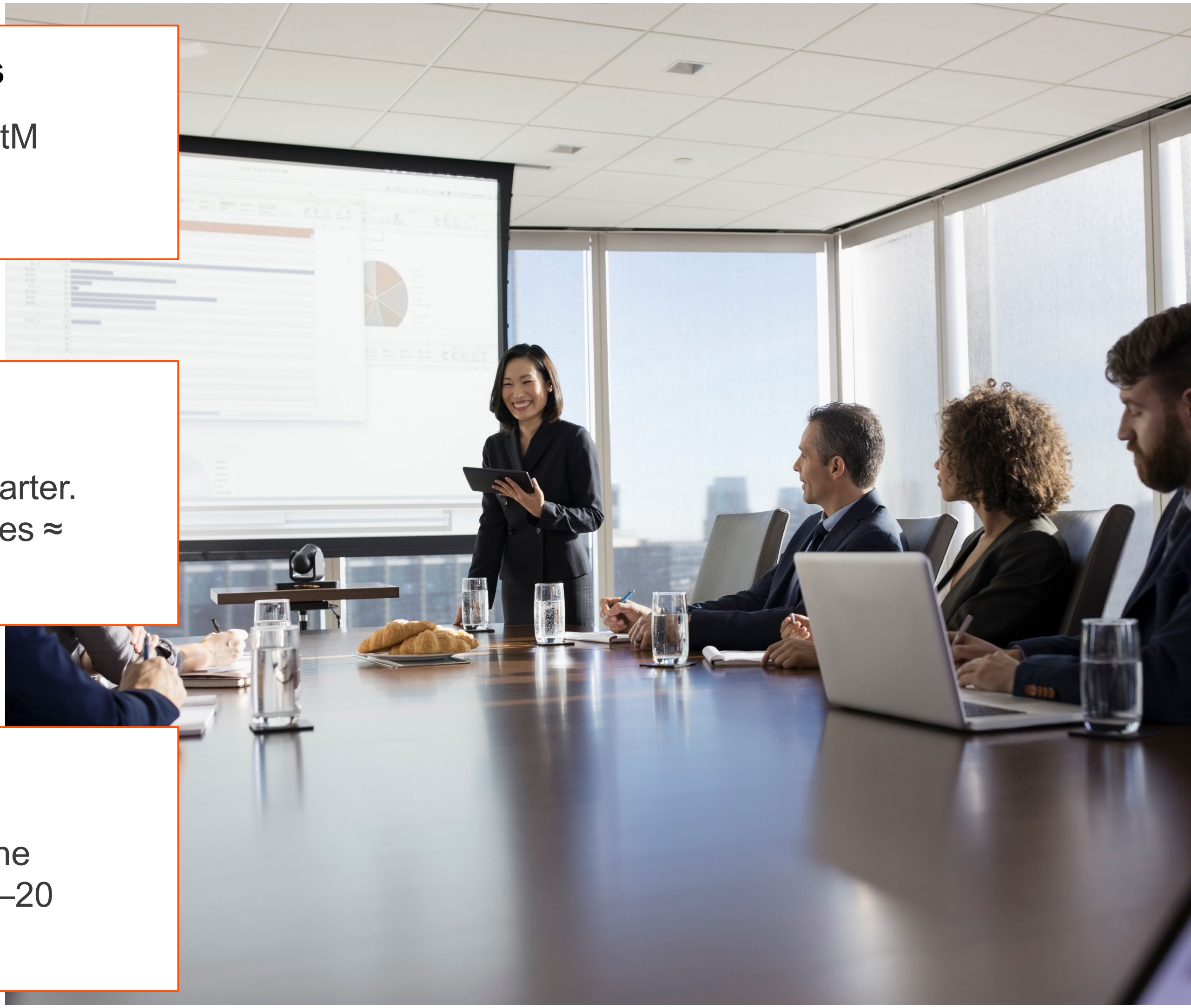
Capacity Cannot Be Bifurcated → Falls In Scope of Valuation

Capacity may be considered closely related to electricity service, not qualify for bifurcation, and must be accounted at fair value. Historically rarely valued.

Significant Day 1 Gain/Loss

Difference between market price and contract price may create a significant Day 1 gain or loss, which has to be accounted for.

Key valuation challenges



1

Large Mark-to-Market Exposure / Day 1 Gain/Loss

300 MW × 15 yrs × $15/MWh spread × 8,760 hrs ≈ $591M MtM (undiscounted). Small price movements create outsized P&L impact.

2

Significant Price Volatility

Electricity prices routinely move $5–10/MWh quarter-over-quarter. For the contract above, just $1 shift in the price curve produces ≈ $40M value swing.

3

Capacity Unobservable Beyond 2 Years

Significant component with no market reference for most of the contract tenor. Requires fundamental modeling for the full 15–20 year term.

Fundamental modeled curve as solution

1

Avoid Shifting Short-Term Volatility to Long-Term Horizon

Market data is observable only 3–5 years. DC contracts run 15–20 years, 10+ years beyond the observable curve. Traditional extrapolation of futures injects short-term volatility into long-term valuations. Fundamental curves anchor on long-term supply-demand balance, breaking the link to short-term volatility.

2

Capacity Prices Unobservable

PJM and MISO clear annually, and prices beyond 1–3 years are unobservable. Prices for capacity in other markets are similarly unobservable. A modeled curve is generally required for capacity valuation.

3

Calibrate Day 1 to Zero

US GAAP does not provide a clear path for Day 1 value. Two practices exist: calibration of unobservable inputs (assumption that a model with significant unobservable inputs does not represent transaction price), or calibration premium/discount (if all inputs are observable). Use of a fundamental curve enables the calibration approach.

Fundamental curve approaches

In electricity markets, prices are set by a marginal unit. Fundamental models are driven by the determination of which unit will be marginal.

Dispatch Model

Licensed / vendor provided

Strengths

- Optimal grid dispatch
- Hourly granularity

Considerations

- Non-transparent inputs and assumptions
- Recently significantly decoupled from futures levels
- Potential for volatility as vendor assumptions change

CONE (Cost of New Entry) Model

Can be built in house

Strengths

- Unified approach for electricity & capacity
- Transparent approach and inputs

Considerations

- Requires fuel cost assumptions
- Not as granular as dispatch models

CONE model overview

CONE represents the levelized price per MWh required to recover the full investment in a new generation asset (LCOE — Levelized Cost of New Entry or LCOE).

LCOE = Annualized Capital & Fixed O&M + Fuel & Emissions + Other Variable Production Cost

Annualized Capital & Fixed O&M

Overnight capital cost (EPC) + financing cost (WACC × capital), annualized over plant life.

Insurance, property tax, transportation reservation cost.

Industry refers to the research commissioned by EIA, available since 2012.

Fuel & Emissions

Fuel fundamental curve or futures data.

Emission intensity from EIA.

Emission cost based observable data or EIA forecast.

Other Variable Cost

Variable O&M, also available from EIA.

Variable transportation charges.

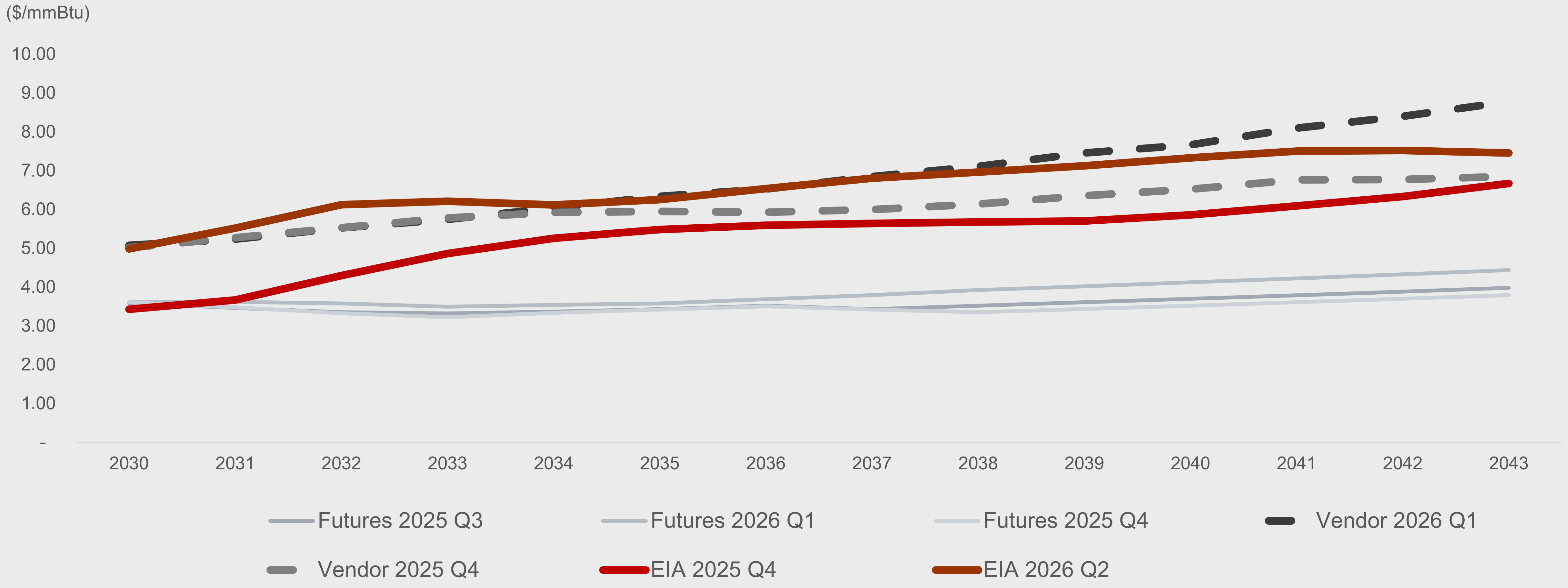
Fuel Input

Fuel links the CONE curve to forward energy market economics.

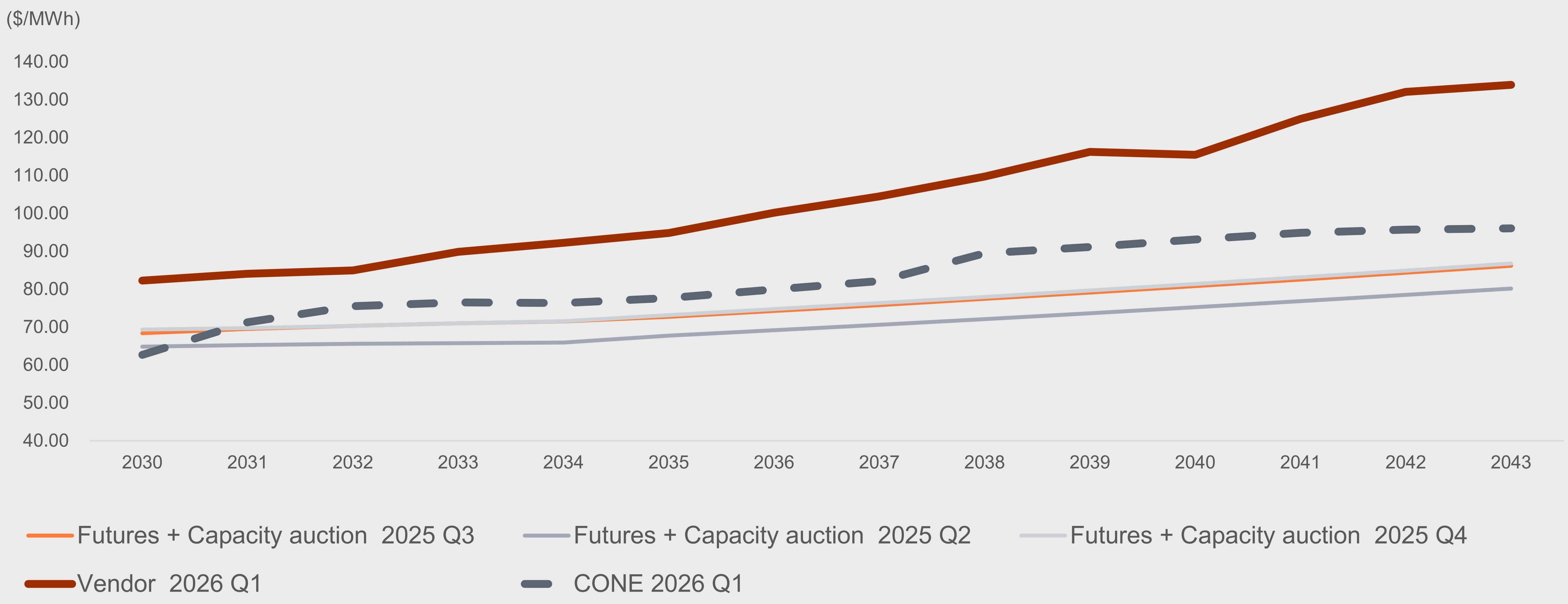
	Gas Futures	**Vendor / Licensed**	**EIA Annual Energy Outlook**
	Near-term market prices for gas.	Third-party fundamental forecast covering the full term. Proprietary methodology, limited transparency.	Developed by US Department of Energy, based on comprehensive, bottom-up fundamental model built on operational, demographic, technological, policy, and demand-supply dynamics across all energy sectors.
Fundamental model	✗	✓	✓
Observable horizon	~5 yrs	Full term	Full term
Volatility	Short-term	Fundamental	Fundamental
Frequency of update	Continuous	Semi-annual	Annual
Transparency	Exchange	Proprietary	Publicly available

BENCHMARKS

Fuel Curve Benchmarks: Henry Hub



Energy Benchmarks: Electricity + Capacity in PJM



SECTION III

Complex Valuations & Securities Overview

Complex valuations in the energy markets

PPAs – linear, DCF-valued

Most PPAs are linear products valued using a discounted cash flow models.

Heat Rate Call Options (HRCO)

Some PPAs are structured effectively as HRCOs - purchaser pays a spread between energy and gas prices for the hours the plant is dispatched. Require closed-form option pricing or Monte Carlo simulation based on the plant heat rate and gas/power prices. Sensitive to volatility and correlation.

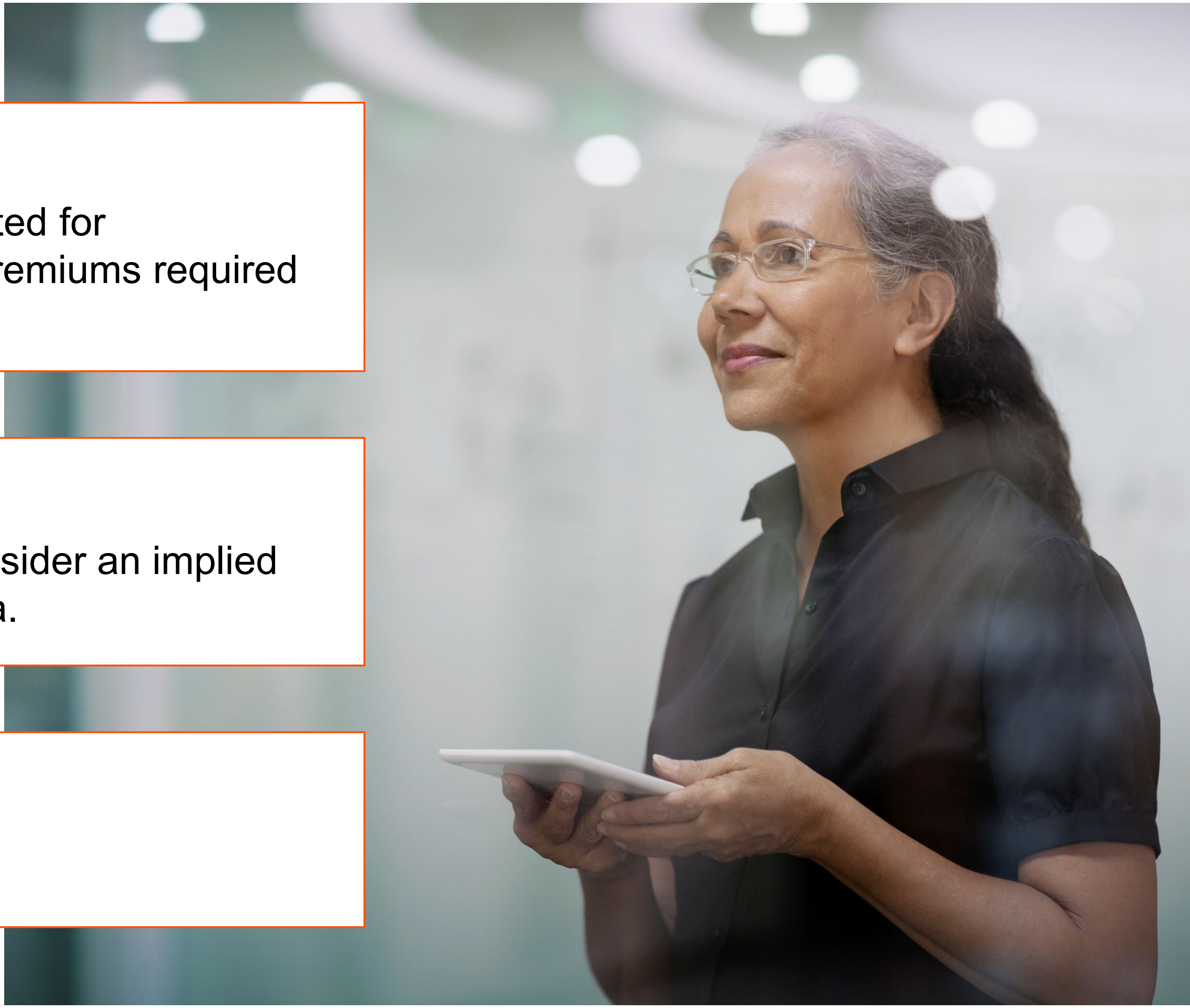
Embedded optionality from price consensus mechanisms

DC contracts often include price-sharing and protective provisions — price protection against extreme price events, revenue options, etc. These embedded options cannot be valued analytically and require Monte Carlo simulation.

Earnouts based on energy prices

Common in M&A to bridge the bid-ask spread. Payoff driven by commodity prices exceeding a threshold over an earnout period (e.g., average oil price above strike). Valuation requires Monte Carlo simulation. Modeling matches the forward curve as the expected case but introduces volatility around it.

Key inputs for complex valuations



Volatility

Based on implied volatility surface where available, extrapolated for subsequent periods toward long-term mean. Cash volatility premiums required for daily options.

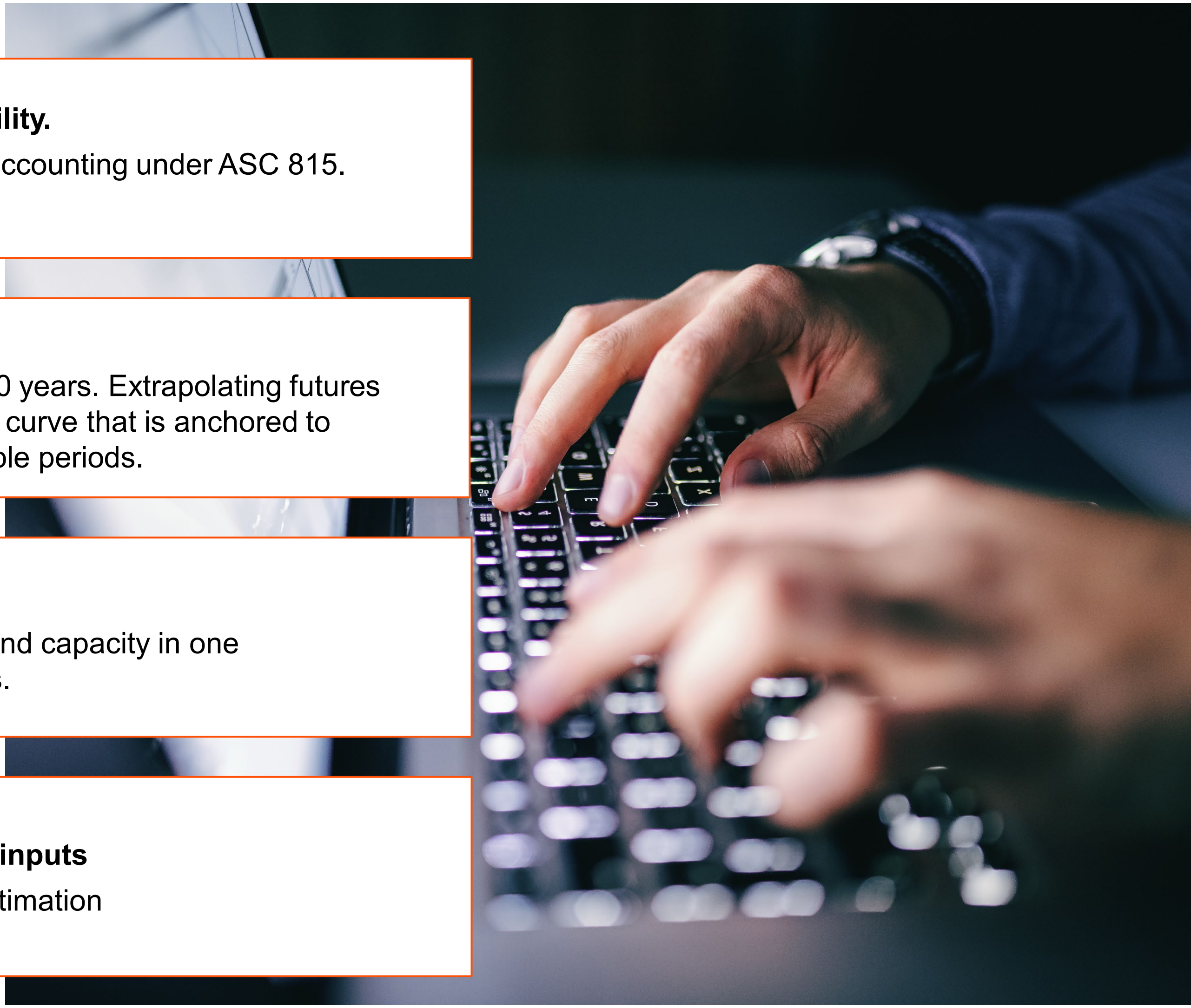
Correlation (energy vs gas prices)

Historical correlation data may understate implied levels. Consider an implied correlation estimate based on forward-look and historical data.

Hourly scalars

Required for hourly simulations.

Data Center PPAs & Complex Securities — Executive Summary



1

DC contracts carry significant mark-to-market exposure and volatility.

Large size, long tenors, and fixed load commitments trigger fair value accounting under ASC 815. Small moves in the price curve generate large MtM and P&L swings.

2

Futures data is challenging to use as a long-term price forecast

Observable market data covers only 3–5 years; DC contracts run 15–20 years. Extrapolating futures introduces short-term volatility into long-term valuations. A fundamental curve that is anchored to structural supply-demand economics can be considered for unobservable periods.

3

A fundamental curve or CONE based model is a potential solution

The Cost of New Entry model can be built in-house, covers electricity and capacity in one framework, and can be benchmarked against observable market prices.

4

Valuation of earnouts and complex structures requires additional inputs

Volatility and correlation are unobservable and require sophisticated estimation

Thank you