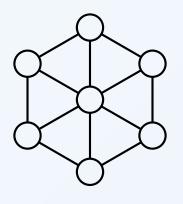


Virtual Power Desk as a Service (VPDaaS)

Quant Power, Democratized—One Phase at a Time



Forecast. Optimize. Control.

AI-native forecasting, risk & strategy optimization for tomorrow's power traders

We are building a lean, durable platform to help power traders move from gut-feel to disciplined quant-driven strategy — with solutions once reserved for elite desks.

Anguel Grigorov

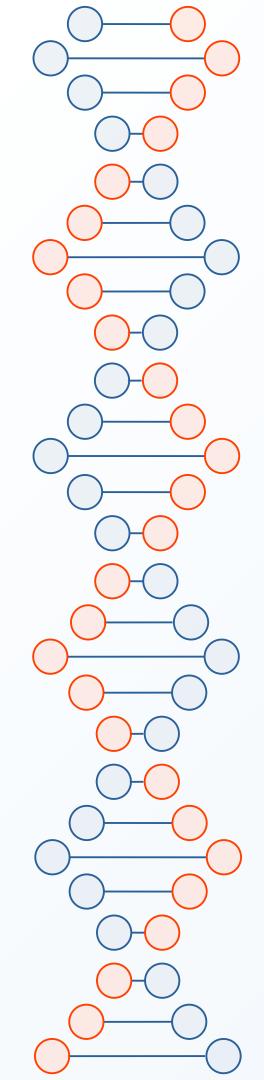
Founder, EnergyMarketAI / VPDaaS

anguel@vpdaas.com

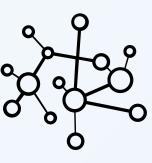
energymarketai.com

linkedin.com/in/anguel-grigorov-16019929b

% @VPDaaS | +1 (936) 256-0830



Power Trading Is Big — and Blind



300K positions. Few see the edge.

300,000 daily positions daily. 12,500+ nodes. 24 hours.

→ Yet most desks trade only a sliver — and often on gut feel.

Billions in DART spread value — left on the table.

Why? Most desks lack:

- Directional forecasting at node/hour granularity
- Per-position risk quantification—not just portfolio VaR
- A simulation engine that stress-tests strategies at scale
- Integrated solutions that are intuitive, auditable, and affordable

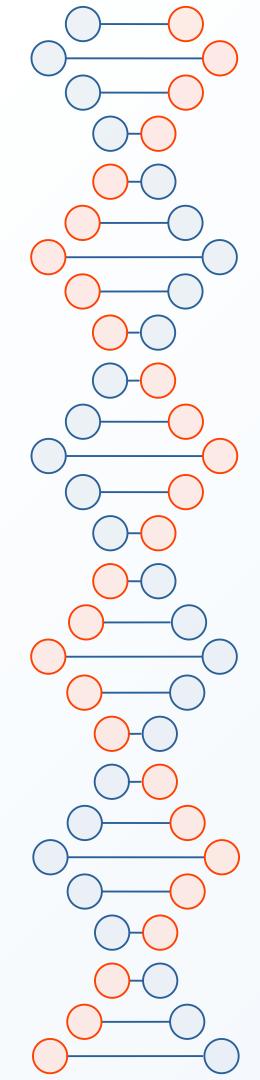
Even elite shops rely on brittle intuition, patchy models, or black-box vendors.

When regime shifts like the Flip-Over hit — strategies break. Fast.

Power trading remains an elite sport.

Most are benched – not by lack of capital, but but by lack of strategy infrastructure.

Auditable in the way that matters: every trade has a traceable logic trail — from signal to sizing.



Why Power Trading Remains an Elite — and Fragile — Game



Worn by few. Earned by fewer. Broken by regime shifts.

Smart power trading isn't just about calling the price.

It's a system — and most desks fail to complete it.

They need to:

- Forecast the next-day DART spreads
- Quantify risk per (hub, hour) not just portfolio-wide
- Size positions to match risk appetite and capital
- Test strategies forward across turbulent, plausible market scenarios

But here's the truth:

- Forecasts miss regime shifts like Flip-Overs
- Risk is guessed, not measured
- Sizing is rule-of-thumb, not capital-aware
- Simulation if it exists is crude or absent

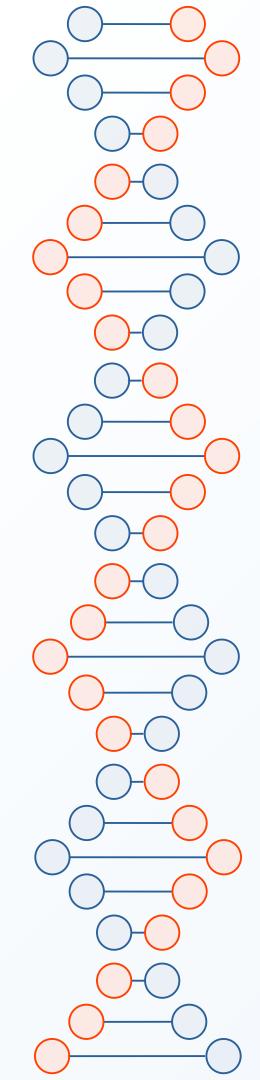
The result?

Most shops trade half-blind.

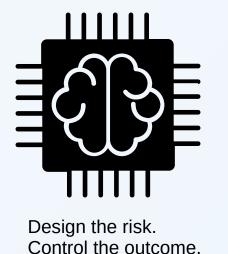
Even good traders get blindsided.

Despite the explosion of data and modeling, the industry lacks a foundational infrastructure layer — a unified platform where trading strategies can be built, tested, and evolved systematically.

This gap traps desks in legacy workflows and tribal knowledge, preventing scalable, repeatable edge.



VPDaaS: The Virtual Quant Desk — Strategy by Design, Not by Guesswork



We unify the four pillars of intelligent trading — in one modular platform:

1. Directional Forecasting

Fast, scalable DART spread signals across hubs + hours

→ Built to catch regime shifts like the Flip-Over

2. Per-Position Risk Modeling

Explicit \$/MWh downside for every (hub, hour) position

 \rightarrow Go beyond portfolio VaR — see risk where it lives

3. Capital-Aware Position Sizing

Turn risk appetite into dynamic MWh allocations

→ Strategy shaped by capital, not intuition

4. Historical-Forward Simulation

10,000+ plausible futures to test strategy resilience

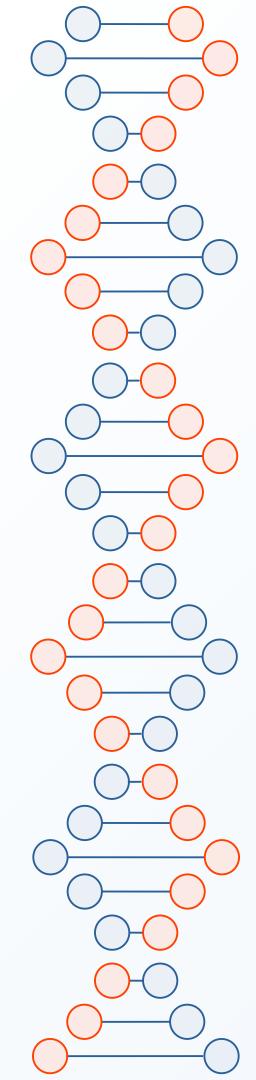
→ Don't just hope — simulate and know

Use them à la carte — or together, as a full-stack cloud platform.

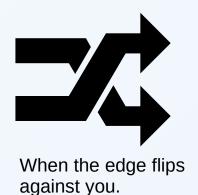
VPDaaS is the missing meta-layer

for scalable virtual-power trading-strategy design.

Quant Power, Democratized.



The Flip-Over Event: Rare. Costly. Forecastable



In most hours, price regimes are stable.

DART spreads behave predictably — until they don't.

Suddenly, a set of hubs that usually paid — doesn't.

A region that followed the pattern — snaps out of it.

We call it a **Flip-Over**:

A sudden, coordinated reversal in spread direction across many hubs.

Think of Flip-Overs like equity market corrections — only faster, spikier, and spatially coordinated.

These events strike without warning.

They break strategies.

They erase P&L.

Most desks don't see them coming.

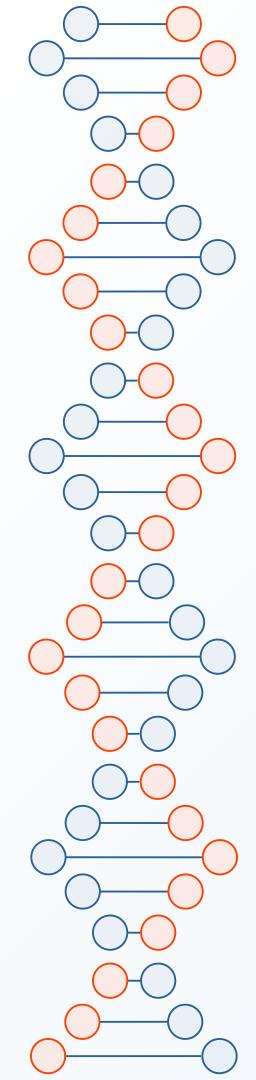
Most models don't even try.

We do.

And that's the point.

If you can forecast Flip-Overs —

- You can design resilient strategies.
- You can **build a meta-system that adapts**.
- You can win.



Flip-Overs Are the Enemy — Here's How We Beat Them



Flip-Overs are sudden reversals in DART spreads across entire regions.

Day-Ahead prices collapse behind Real-Time.

Normal trading patterns fail. Losses pile up fast.

They strike every **30–120 days** and can persist for **3–4 days**.

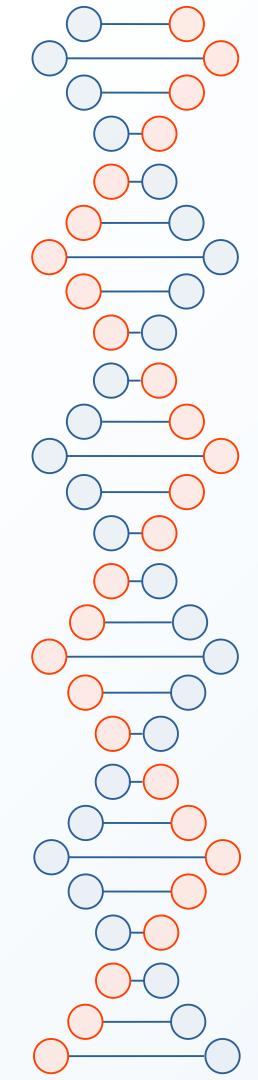
Most models miss them. We don't.

We track:

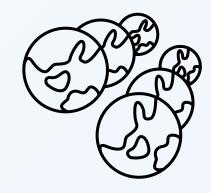
- Price & volatility shifts across hubs
- Weather/load forecast surprises
- Transmission and shadow price moves
- Outages and fuel mix changes

Result:

- We forecast flip-overs before they strike.
- Early alerts that help traders adjust fast before Flip-Overs do damage.



History Is Just One World. We Simulate 10,000+.



One past. Many futures

Most trading strategies are judged by what happened — one realized past.

History is just one world — but thousands more could've happened.

We simulate them.

Our Simulation Engine is to backtesting what probability theory is to a single coin flip.

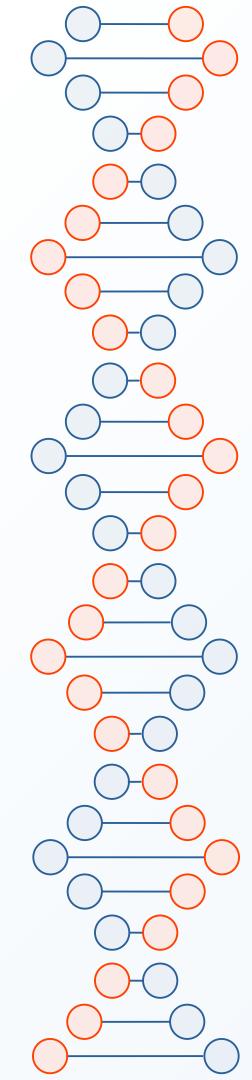
It generates 10,000+ alternate market realities — each grounded in historical volatility, spread behavior, and structural drivers.

For every strategy, we ask:

- What's the expected return across these worlds?
- How often does ruin as defined by client risk tolerance occur?
- How does performance evolve as risk appetite increases?

We turn market history into a launchpad — not a trap.

→ That's how we help clients design resilient, risk-aware strategies.



From Expertise to Execution: VPDaaS in Action



VPDaaS integrates **forecasting**, **risk**, **position-sizing**, **and optimization** —delivered it **as a service**.

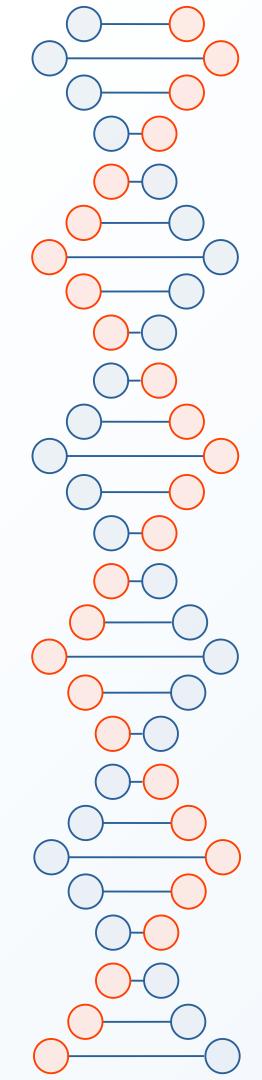
We don't sell dashboards. We power decisions:

- 300,000 daily directional forecasts (DART sign, per hub/hour)
- Per-position risk metrics tailored to client limits
- Historical-forward simulations to size strategies before risking capital

Every simulation we run becomes a data point in a growing library of trading logic — what worked, when, and why. Over time, that archive evolves into something more: the memory and decision engine of modern power trading.

- Playbooks for responding to regime shifts like Flip-Overs
- → Quant power, once limited to elite desks, now delivered as a service.

Our clients stay lean — but think like the majors.



From Black Boxes to Transparent Solutions

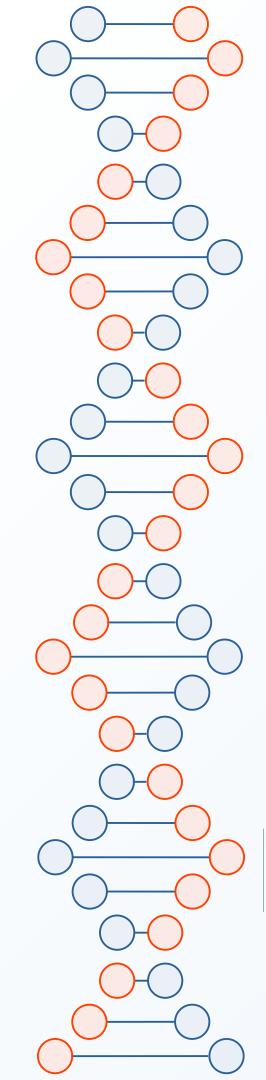


Most third-party analytics are black boxes:

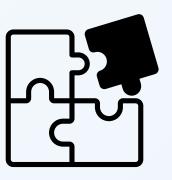
- Opaque models with limited customization
- Hard to test, impossible to tweak
- Expensive, inflexible, and often overfit

VPDaaS is different:

- Modules that fit into your workflow
- Transparent models tweak assumptions, run variants
- You see the logic. You control the risk.
- Pay for capability, not mystery.
- → Quant power made accessible and auditable.



Building Tomorrow's Power Desk Today



No noise. No sprawl. Just signal.

We're starting lean — and solving deeply.

Our first clients will use VPDaaS to test and optimize trading strategies before capital is put at risk.

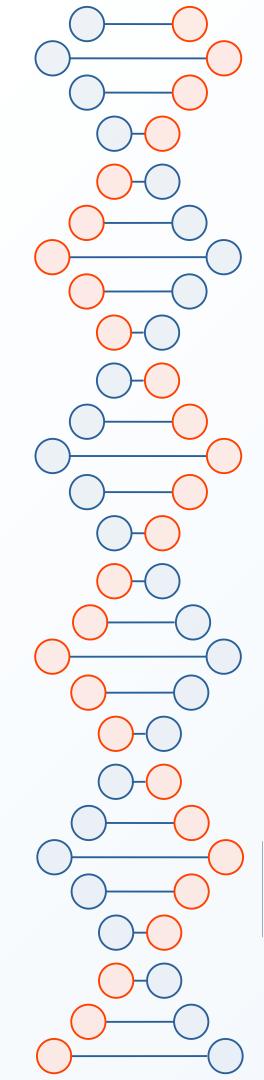
In the next 18 months, we aim to:

- Start where we know the terrain MISO and we build the foundational logic engine. Expansion to other ISOs is roadmap, not prerequisite.
- Refine usability through real-world pilot feedback
- Extend forecasts and optimizations across multiple risk tiers
- Build reusable strategy libraries and playbooks for recurring situations
- Begin building simulation archives to benchmark performance and seed deeper insight

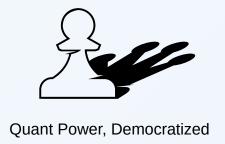
In time, that archive evolves into something more:

the compass and chronicle of power trading — a keeper of logic, risk, and edge.

 \rightarrow Each iteration strengthens our core engine — and compounds client edge.



Built for Traders — Priced for All



Today, only the largest desks can afford custom quant infrastructure.

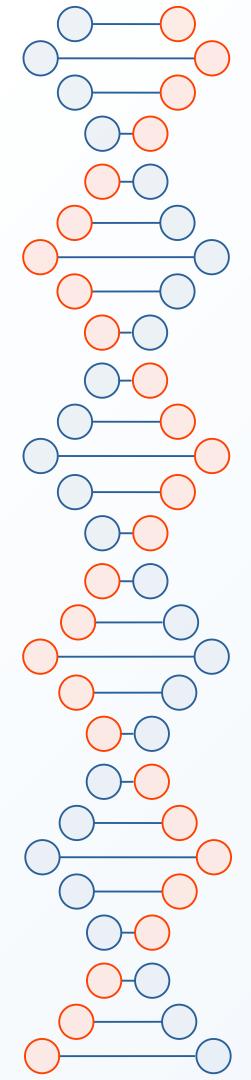
- → They build it in-house or pay steep fees for closed, generic tools.
- → Everyone else trades on gut feel, stale heuristics, or vendor noise.

VPDaaS flips that equation:

- AI-native forecasting across all 12,500+ nodes and 24 hours
- Strategy simulation engine built for scale, speed, and clarity
- Intuitive solutions for $forecast \rightarrow position \rightarrow risk$ chain of decisions
- Pay-per-seat or per-simulation pricing no \$250k buy-ins

Democratizing quant power means putting it within reach — not just building it beautifully.

Now we're ready to scale — and bring this power to desks across the market.



From Niche to Nation: TAM Unlocked*

| Market Tier | #Units** | Avg Spend | TAM Opportunity |
|-----------------------------------|----------|-----------|-----------------|
| Trading Desks (US) | 4,500 | ~\$50K | \$150 mill |
| Independent Power Producers (US) | 2,300 | ~\$70K | \$80 mill |
| Retail Energy Buyers (US) | 1,600 | ~\$70K | \$55 mill |
| Utilities & Co-oops (US) | 6,000 | ~\$250K | \$190 mill |
| International & Internal Teams | 3,000 | ~\$50K | \$125 mill |
| TOTAL | 17,400 | | \$600 mill / yr |



^{**} Unit of sale is defined at the team level (e.g., trading desks, procurement teams, risk desks).

We target a \$21M Serviceable Obtainable Market /SAM/

in the course of the next 3-5 years (see next slide).



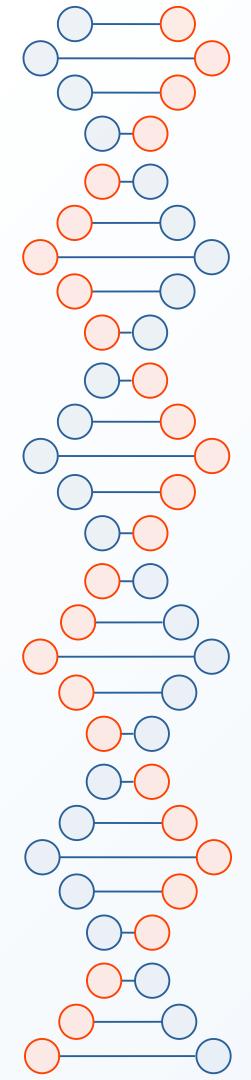
Thousands of Active Desks.

Multiple Buyers per Org.

High-Repeat Purchase Potential.

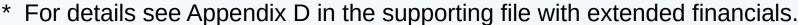


U.S. Generator Footprint



TAM is the Dream, SOM is the Plan*

| Market Tier | TAM Opportunity | SOM % | SOM** (Initial Market Capture) |
|-----------------------------------|-----------------|-------|--------------------------------|
| Trading Desks (US) | \$150 mill | ~5% | \$8 mill |
| Independent Power Producers (US) | \$80 mill | ~6% | \$5 mill |
| Retail Energy Buyers (US) | \$55 mill | ~3% | \$2 mill |
| Utilities & Co-oops (US) | \$190 mill | ~1% | \$1 mill |
| International & Internal Teams | \$125 mill | ~3% | \$5 mill |
| TOTAL | \$600 mill / yr | | \$21 mill / yr |



^{*} For details see Appendix D in the supporting file with extended financials.
** Intended Serviceable Obtainable Market (SOM) over the course of the next 3-5 years.



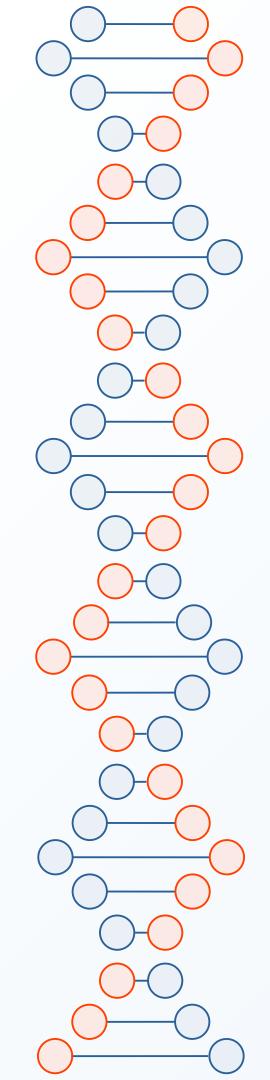
Thousands of Active Desks.

Multiple Buyers per Org.

High-Repeat Purchase Potential.



U.S. Generator Footprint



Funding Ask: \$2.0M to Launch and Scale*

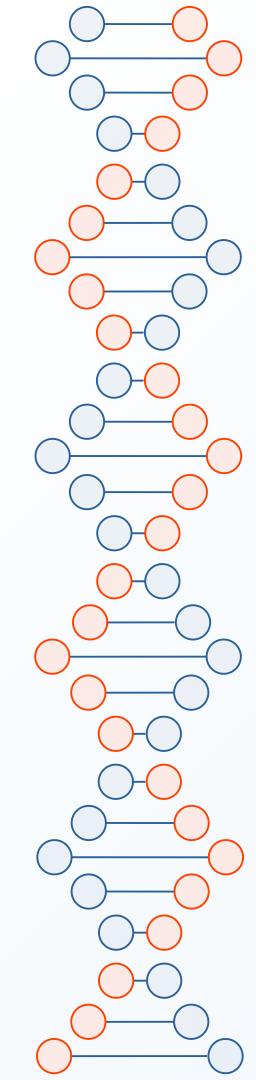
18-month runway to deliver, iterate, and compound value.



| Item | Amount |
|------------------------------|----------------|
| Core Team + Contractors | ~ \$1.280 mill |
| Infra & Operational Expenses | ~ \$410K |
| Total (Core Operations) | ~ \$1.67 mill |
| Resilience Buffer @ 20% | \$330K |
| Target Raise | \$2.0 mill |

^{*} For details see Appendices C & D.

This budget is scoped, stress-tested, and aligned to the critical path.



Product + Business Model



Core Offerings (Phase I):

Forecast.

- Flip-Over regime shift forecasting batch-mode, high-impact alerts
- Built on fundamental drivers and structural patterns in market behavior

Design.

- Historical-forward simulation engine 10,000+ alternate market realities
- Optimizes trading strategies for return vs. ruin before capital is at risk

Deliver.

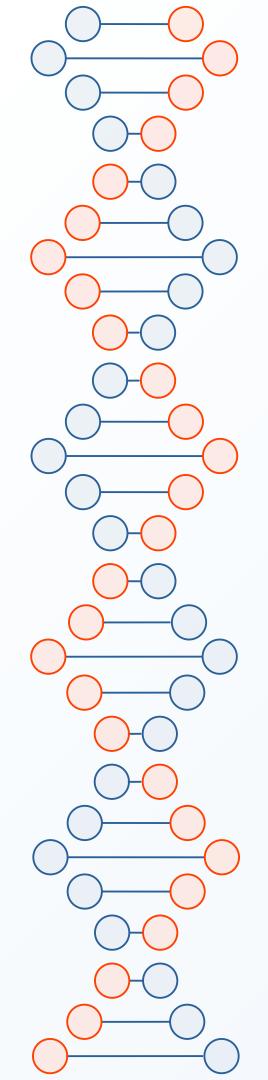
- Diagnostics for client-submitted signals: expected return & risk of ruin
- Optimized strategy recommendations, tailored to client limits
- Delivered via automated PDF-style reports (SFTP/email), no front-end required

Engagement Models:

- Subscription access (tiered by usage & modules)
- Optional consulting for onboarding or analytics refinement
- No lock-in: transparent engines built to earn trust

Quant-grade power — without the quant team.

Precise. Practical. Accessible.



Join Us in Building the Future of Power Trading



Invest in the future of power markets — scalable, transparent, data-driven.

Help democratize world-class quant infrastructure for every trading desk.

Partner with us to build VPDaaS — where better forecasts meet optimized strategies.

Let's empower tomorrow's traders, today.

Get in Touch:

Anguel Grigorov

Founder, EnergyMarketAI / VPDaaS

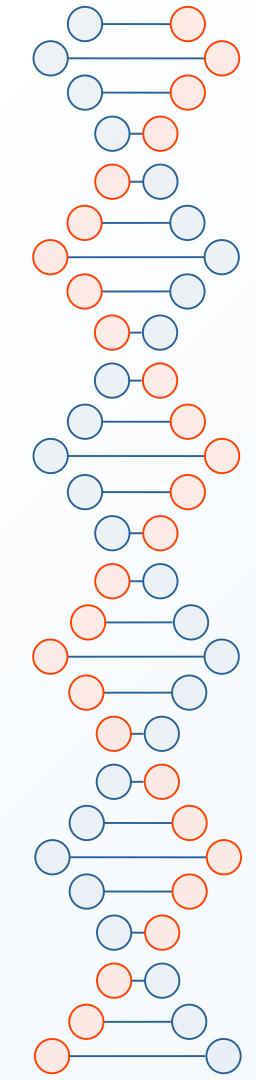
anguel@vpdaas.com | anguel@energymarketai.com

linkedin.com/in/anguel-grigorov-16019929b

@VPDaaS

+1 (936) 256-0830

energymarketai.com



Appendix A: Founder's Background: A Quant with Real-Market Scars



Anguel Grigorov

Quant, builder, battle-tested.

Domain & Market Expertise

- 24+ years of quantitative and management experience in most energy markets
- **6.5 years designing and trading real-money strategies** in the MISO nodal power market independently
- Built algorithmic agents for **signal generation**, **risk control**, **position-sizing**, **and forward simulation**
- Deep familiarity with **DART spreads, congestion patterns, and nodal market dynamics**

Quantitative & Technical Strength

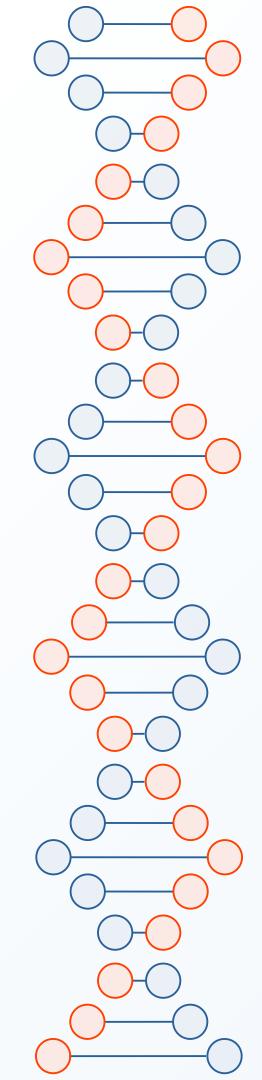
- Architected **custom C++ engines** for historical-forward simulation across alternate realities
- Developed **forecasting and risk engines** tailored to the noisy, sparse, regime-shifting environments
- Experience in machine learning, regime detection, and risk quantification
- Held quantitative, energy and managerial roles at S&P Global/Platts, Centrica/Direct Energy, LyondellBasell, Enron Corp, and U.S. Bank

Product Vision & Execution

- Built and traded with a working VPDaaS prototype in real markets, with real risk
 - → The system proved its edge in live conditions
- **Discovered the flip-over pattern** through years in the P&L trenches
- Driven to move beyond gut-feel trading toward systematic, risk-aware strategy design

I built VPDaaS to manage my own risk — it kept me in the game.

Now I'm scaling it to level the playing field.



Appendix B: Design Philosophy of VPDaaS

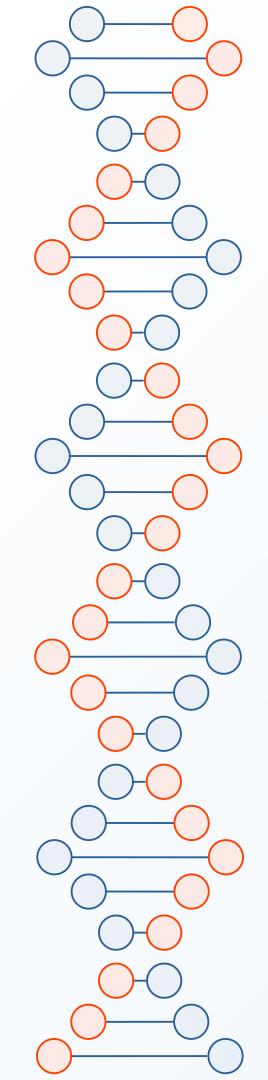
Resolving Contradictions, Not Tweaking Tools



- TRIZ a systems-engineering theory shows that innovation emerges by resolving core contradictions, not by tinkering with parts.
- In power trading, the contradiction is this:
 - Traders need strategy but are trapped in purely reactive workflows.
 - They're mired in a fog of daily, tactical, low-level decisions without strategic control.
 - They need control based on optimization but face chaos and noise.
- VPDaaS resolves this by elevating to a higher-level subsystem: We shift from a trader-centric, micro-decision loop
 - → to a platform of optimization, strategy, and engineered design.

This is **not just another tool**.

It's the **next level of the power trading system**.



Appendix C: Infra & Ops Budget

What it takes to deliver, not just impress

Great quant talent is table stakes —

but clean data, compute, and tools are what keep them sharp.

This infrastructure budget supports core workflows:

forecasting, simulation, ingestion, modeling, and delivery — for 18 months.

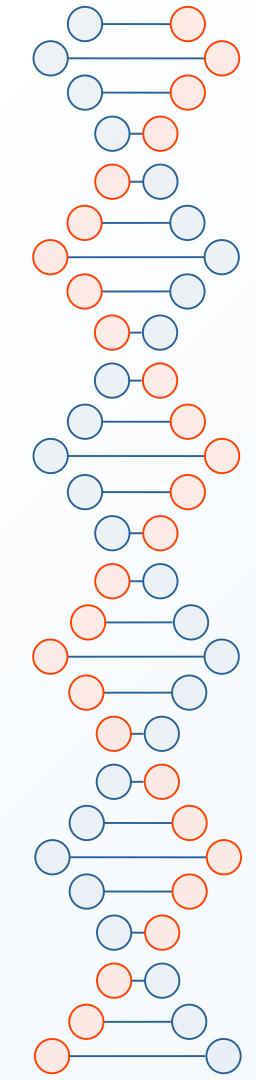
No lavish perks. No gourmet coffee machines. Just what's needed to build — and deliver.

| | odular. |
|-----|---------------|
| Dis | sciplined. |
| Bu | ilt to Scale. |

| Category | Purpose | Est. Cost (18 mo) |
|----------------------------|---|---------------------|
| Data Acquisition | ISO feeds (MISO), weather, cleaned time series from integrator, | \$150K ¹ |
| Cloud Compute (EC2) | Forecasting runs, simulations, diagnostics, batched inference | \$90K |
| Storage (S3 / RDS) | Historical data, simulation archives, model checkpoints | \$25K |
| Dev Tooling & Productivity | 4 laptops (incl. founder), LLM/API access, GitHub, misc tools | \$30K |
| Legal & Admin | Incorporation, contracts, tax filings, insurance, Security & Compliance Advisor | \$100K |
| CRM / Comms Stack | Email, prototype dashboard, light web presence | \$15K |

Subtotal: Infra + Ops → \$410K

Covers MISO data ops + room to test proprietary outage forecasts (e.g., YES/IIR). Could unlock significant edge — but must be tested, not assumed.
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 ©2025 Anguel Grigorov — Quant Power, Democratized.



Appendix D: Core Team Plan

Quant-first, lean by design

Building a lean, expert team — focused on delivering high impact and scalable value.

The core roles are tightly scoped to Phase I goals:

- Flip-over forecasting
- Historical-forward simulation
- Quant-grade diagnostics and signal evaluation

Everything non-core is outsourced. Everything core is quant.

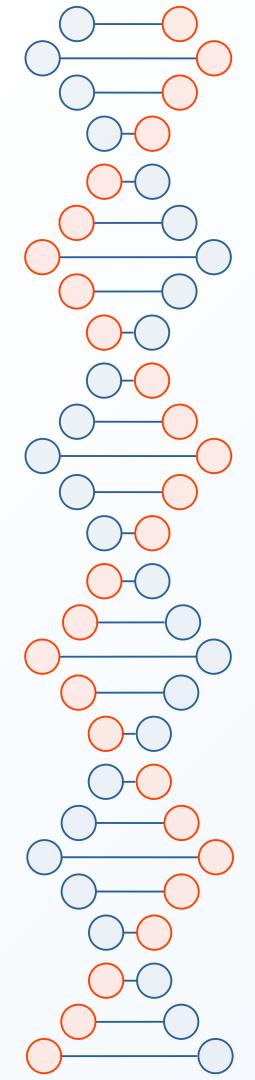


| Role | Function | FTE | Est. Cost (18 months) |
|-----------------------------------|--|-----|-----------------------|
| Founder (You) | Strategy, architecture, integration, oversight | 1 | \$180K |
| Quant – Forecasting | Flip-Over models, signal design, regime detection | 1 | \$270K |
| Quant – Simulation | Historical-forward worlds, risk logic, P&L metrics | 1 | \$270K |
| ML / Quant Dev | Batch inference, diagnostics, backend glue | 1 | \$270K |
| Data | ISO data ingest, database scaffolding | 0.4 | \$96K |
| Dev Ops/Cloud (Contractor) | Cloud setup | 0.4 | \$96K |
| Client Liaison | Deliverables, client feedback loop | 0.2 | \$39K |
| Design / UX | Auto-report PDFs, alert design, branding cleanup | 0.1 | \$19.5K |
| Sales / BD Advisor | Early outreach, partnership shaping | 0.2 | \$39K |

Subtotal: Salaries + Fractional Contractors → **~\$1,280,000**

All fractional roles assumed to be hired via reputable agencies or freelance marketplaces to avoid person-risk overhead.

¹ Built for speed, not bureaucracy. We pay well — in cash and clarity — but keep overhead light.



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