MCP SERVER | NO CODE | CLOUD HOSTED

EIA Natural Gas MCP for AI Agents

Analyze U.S. Commodity Price Movements & Storage Levels

The EIA Natural Gas MCP provides comprehensive U.S. natural gas market intelligence, pulling data from Henry Hub pricing benchmarks to weekly underground storage levels. You get real-time views of production by state, industrial consumption patterns, LNG import/export volumes, and full supply-demand balance reports.

A+ Quality Score 100/100

natural-gas | henry-hub | commodity-storage | lng-exports | pipeline-flows | energy-market

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vinkius.com/mcp/eia-natural-gas-gas-market-intelligence

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

EIA Natural Gas — Gas Market Intelligence MCP

7 tools available
Cloud-hosted on Vinkius

This connector gives you access to the definitive data on the U.S. natural gas market. Whether you're tracking daily price movements or modeling annual storage changes, this MCP collects critical operational metrics from multiple sources. You can pull current pricing across Henry Hub, citygate, and wellhead levels. Need to know how much gas is moving? Get detailed figures on LNG exports by terminal or track pipeline flows with Canada and Mexico. The system also provides the weekly underground storage report—the data point that moves markets—and breaks down consumption by residential, commercial, and industrial sectors. When you connect this MCP via Vinkius, your AI client processes all these complex datasets into actionable intelligence, allowing you to build a complete picture of energy market risk without manually cross-referencing multiple government dashboards.

Core Capabilities

01 — Calculate real-time natural gas prices

Retrieve current benchmark pricing for Henry Hub spot rates, covering wellhead, citygate, industrial, and residential markets.

02 — Determine supply and demand balance

Generate a comprehensive overview showing total production withdrawals against consumption figures, plus net changes from imports, exports, and storage.

03 — Track weekly gas storage levels

Access the crucial underground natural gas storage report, detailing current working gas volumes and regional trends.

04 — Model market flows and reserves

Gather data on pipeline trade with neighboring countries, total production withdrawals, and proved natural gas reserves.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/eia-natural-gas-gas-market-intelligence** — connect your AI agent in three steps.

01 Connect your preferred AI client to this MCP via Vinkius. You authorize access to the EIA's deep data streams.

02 Prompt your agent with a specific question, like 'What was the net gas injection last week?' The agent selects and executes the necessary tools.

03 Your client receives structured, up-to-date natural gas metrics—whether it's price benchmarks or consumption by sector—ready for analysis.

The bottom line is that your AI client treats this MCP like a direct data terminal, allowing you to ask complex market questions and get immediate, authoritative answers.

Built For

This MCP targets energy professionals who need reliable, high-volume commodity data. Think gas traders watching price swings or utility planners modeling regional demand spikes. If your job requires understanding where natural gas supply meets consumption across borders and sectors, this is for you.

Energy Trader

Uses the MCP to monitor Henry Hub spot pricing and weekly storage levels to make rapid buy/sell decisions based on market signals.

Utility Planner

Analyzes consumption by sector (residential, commercial) alongside pipeline flows to forecast future capacity needs in specific regions.

Energy Risk Manager

Models the impact of international trade data (LNG imports/exports) and reserves figures on a company's long-term risk profile.

What Changes When You Connect

01 Know the market's pulse instantly by using get_natgas_prices to track Henry Hub spot rates, eliminating manual checks across multiple industry websites.

02 Get a holistic view of supply and demand from get_natgas_summary. You see production withdrawals weighed against consumption in one query, simplifying complex reports.

03 Stay ahead of market shifts: Running get_natgas_storage gives you the weekly underground storage report, crucial data for any gas trader making rapid decisions.

04 Understand regional impacts by running get_natgas_consumption. This tool breaks down usage by sector and state, helping utility planners model local demand accurately.

05 Simplify international risk modeling using get_natgas_trade. You quickly assess the impact of LNG imports/exports with Canada or Mexico on domestic supply.

Real-World Applications

Modeling regional gas shortages

A utility planner needs to know if a predicted industrial demand spike can be covered. They use get_natgas_consumption combined with get_natgas_production to verify if current marketed production is sufficient for the forecasted state-level consumption, ensuring no service gaps.

Assessing investment potential in gas reserves

An energy firm wants to evaluate new drilling areas. They use get_natgas_reserves to pull proved natural gas data and then cross-reference it with get_natgas_production trends to estimate viable market scale.

Analyzing international trade shocks

A trading desk needs to understand if a dispute with Mexico will affect supply. They use get_natgas_trade to pull recent pipeline flow data, immediately quantifying the potential loss of cross-border volume.

Determining optimal timing for large purchases

A commodity buyer wants to time a massive gas purchase. They run get_natgas_storage and combine it with get_natgas_prices to see if the storage level relative to historical averages signals an opportune buying window.

Patterns to Avoid

Confusing supply with reserves

✗ AVOID

A user asks, 'What is the gas supply?' and receives a mix of current production numbers, making it impossible to determine true market depth.

✓ INSTEAD

To get accurate data on long-term resource availability, specifically use get_natgas_reserves. This isolates proved natural gas reserves from daily production figures.

Ignoring cross-border flows

✗ AVOID

A user only looks at domestic consumption and ignores the possibility of international pipeline disruptions or LNG export limits.

✓ INSTEAD

Always include get_natgas_trade when modeling supply. This tool provides necessary data on imports, exports, and flow rates with Canada/Mexico.

Overlooking sector-specific demand

✗ AVOID

A user sees high overall consumption but doesn't know which sector is driving the need (e.g., residential vs. electric power).

✓ INSTEAD

Use get_natgas_consumption to break down demand by specific sectors and states, giving you granular insights into where the pressure points are.

The Right Fit

You should use this MCP if your core job revolves around forecasting energy supply and demand. Specifically, if you need to correlate weekly underground storage levels (get_natgas_storage) with current benchmark prices (get_natgas_prices), this is a must-have. However, don't rely on it if you only need simple historical trends; those are better handled by specialized archival databases. Also, remember that while get_natgas_summary gives an overview, for true financial risk assessment, always check the granular details

provided by get_natgas_trade and get_natgas_consumption to understand *where* the market pressures originate.

EIA Natural Gas MCP: Analyzing Commodity Price Trends with EIA Natural Gas

Before this MCP, analyzing natural gas prices meant jumping between multiple official websites. You'd check Henry Hub spot rates in the morning, then separately look up production figures and consumption data to even start a basic model. It was a tedious cycle of opening tabs, copying raw numbers, and stitching together disparate reports just to understand market health.

Now, your agent connects directly to this MCP. You ask it for an overview—say, the current price along with recent storage changes. The result isn't a spreadsheet you have to format; it's an immediate, synthesized answer that gives you actionable insights into supply and demand balance.

EIA Natural Gas MCP: Mapping Supply-Demand Dynamics Using EIA Natural Gas

Manually tracking natural gas flows was a nightmare. You had to check separate reports for LNG exports, pipeline trade volumes with neighboring countries, and state-by-state consumption totals. Missing one data point meant your entire forecast—and risk assessment—was flawed.

With this MCP, you run get_natgas_trade alongside get_natgas_consumption. You instantly map the total available supply against specific regional demand patterns, allowing you to model complex international and domestic energy flows in minutes.

7 Tools in the EIA Natural Gas MCP for Market Data Analysis

These tools let you get everything from live pricing benchmarks to detailed reports on consumption by sector and international pipeline flows.

#	TOOL	DESCRIPTION
01	`get_natgas_prices`	Retrieves current natural gas prices for key benchmarks including Henry Hub, citygate, wellhead, industrial, and residential markets.
02	`get_natgas_summary`	Provides a high-level overview of the natural gas balance, summarizing total production, consumption, imports, exports, and storage changes.
03	`get_natgas_reserves`	Accesses proved reserves and exploration data for natural gas resources.
04	`get_natgas_production`	Gathers detailed figures on natural gas production, including gross withdrawals and marketed production volumes.
05	`get_natgas_trade`	Tracks international energy movement by detailing natural gas imports, exports, and pipeline flows with Canada or Mexico.
06	`get_natgas_storage`	Provides the official weekly underground natural gas storage levels report, a key market indicator.
07	`get_natgas_consumption`	Details how natural gas is consumed by various sectors, both nationally and at the state level.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U What was the net natural gas storage change last week?

📦 **U.S. Natural Gas Storage Update**

The working gas total is 2,584 Bcf.
Net Change: +15 Bcf (Injection)
This increase puts the market 11.3% above its five-year average.

REGION	CURRENT VOLUME (BCF)	CHANGE VS 5YR AVG
East	612	+8%
Midwest	487	+12%
South	892	+14%

U Give me a full overview of current pricing and demand.

📈 **Natural Gas Market Snapshot**

Pricing Benchmarks:
Henry Hub Spot: $2.84/MMBtu (Up 4.8% from last week)
Sector Consumption (National):
• Residential: 35% of total usage
• Industrial: 30% of total usage
• Electric Power: 25% of total usage

Overall, consumption remains strong in the residential sector, putting upward pressure on prices.

U What are the biggest drivers for gas trade this month?

🚢 **U.S. LNG Export Report**

The latest export volume clocked in at 11.8 Bcf/day.
Year-to-date total reaches 4,307 Bcf.
Top destination markets are Europe (62%) and Asia (28%).
This confirms the U.S.'s continued dominance as a global LNG supplier.

Frequently Asked Questions

01 **How do I check current natural gas pricing using EIA Natural Gas MCP?**

You can get an instant read on key benchmarks like Henry Hub spot rates. The MCP provides specific prices for wellhead, citygate, industrial, and residential markets so you know exactly what's moving the market right now.

02 **Can this MCP help me forecast storage levels?**

While it doesn't run a full predictive model, it provides the crucial weekly underground storage report. This data point is essential for any forecasting effort because historical changes set expectations for future supply.

03 **Is EIA Natural Gas MCP good for international trade analysis?**

Yes. It tracks natural gas imports, exports, and pipeline flows with countries like Canada and Mexico. This allows you to model how cross-border energy policies affect your domestic supply.

04 **Which sectors consume the most natural gas according to EIA Natural Gas MCP?**

The MCP breaks down consumption by sector, allowing you to see exactly where the demand pressure is coming from—be it commercial use, residential heating, or electric power.

05 **Does this MCP provide data on natural gas reserves?**

It does. You can access proved reserves and exploration data, helping you understand the long-term resource base for natural gas in a given area.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"eia-natural-gas-gas-market-intelligence": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

EIA Natural Gas — Gas Market Intelligence is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

INDEPENDENT PLATFORM DISCLAIMER

DOCUMENT INFORMATION

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MCP Server	EIA Natural Gas — Gas Market Intelligence MCP
Server ID	`019d758d-a423-70c4-a2a8-dddd54521f15`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

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