MCP SERVER | NO CODE | CLOUD HOSTED

# EIA Petroleum — Oil Market Intelligence MCP for AI Agents

## Analyze U.S. Crude Production and Global Supply/Demand Balances

EIA Petroleum — Oil Market Intelligence provides real-time, authoritative data feeds directly from the U.S. Energy Information Administration. Your AI agent uses this MCP to access WTI and Brent crude prices, regional retail fuel costs, current U.S. production figures by state, refinery operational capacity, Strategic Petroleum Reserve levels, and detailed global trade movements. It gives you immediate visibility into the mechanics of the global oil supply chain.

A+ Quality Score 100/100

oil-market | crude-prices | refinery-operations | fuel-retail | petroleum-reserves | energy-supply

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vinkius.com/mcp/eia-petroleum-oil-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 Petroleum — Oil Market Intelligence MCP

8 tools available
Cloud-hosted on Vinkius

Need to understand what's happening in the global oil market? This MCP connects your AI agent directly to the EIA's authoritative data streams. You can ask for anything from today's WTI and Brent spot prices to deep dives on U.S. crude production by state, or track refinery utilization rates across different regions. It helps you map out everything that moves energy: who is importing what country-by-country, how full the Strategic Petroleum Reserve is, and where current stocks stand. When you connect this MCP via Vinkius, your AI client becomes an analyst with instant access to data normally locked behind expensive subscriptions or complex government websites. Instead of piecing together reports from multiple sources, your agent pulls the complete picture—the supply/demand balance sheet for petroleum products.

## Core Capabilities

**01 — Retrieve current crude and product pricing**

Get spot prices for major commodities like WTI, Brent, gasoline, diesel, and heating oil, filtered by area and frequency.

## One Click on Vinkius — From Prompt to Execution

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

01 Your AI client sends a query, asking for specific data like 'WTI prices' or 'SPR levels'.

02 The MCP routes that request to the EIA's live databases, pulling the most current and historical records.

03 You get back structured, actionable intelligence—whether it's a comparison of gasoline prices by state or a summary of global trade movements.

The bottom line is, you don't have to know EIA data protocols; your agent just needs to know what question to ask about the oil market.

## Built For

This MCP targets professionals who need accurate, real-time visibility into global energy flow. It's for commodity traders tracking price volatility, energy analysts building supply models, and logistics planners needing to forecast fuel availability across regions.

**Commodity Fund Manager**

Determines whether current stocks or production changes warrant a shift in investment strategy by cross-referencing the Strategic Petroleum Reserve with global imports.

**Energy Analyst**

Models future supply/demand scenarios for specific products, using data on refinery operations and consumption rates across different sectors.

**Logistics Planner**

Checks current crude imports by country to forecast potential bottlenecks or shifts in fuel availability along major trade routes.

## What Changes When You Connect

01 Instantly assess market volatility by running the get_petroleum_prices tool to compare WTI and Brent spot rates across multiple regions.

02 Eliminate spreadsheet hopping: Use get_petroleum_summary to pull a complete, weekly status report covering stocks, production, and trade in one query.

03 Validate operational capacity quickly. The get_refinery_operations tool lets you check utilization rates for specific refineries without needing proprietary terminal access.

04 Better risk modeling: Combine get_crude_imports with get_petroleum_trade to map out potential chokepoints or shifts in international oil flow.

05 Historical context is key. Use get_petroleum_stocks to track the Strategic Petroleum Reserve alongside commercial inventories over time, informing long-term strategy.

## Real-World Applications

**Modeling an impact from a new pipeline route**

A logistics team uses this MCP to check get_petroleum_trade data and cross-reference it with get_crude_imports. They model how increased flow between two countries impacts the overall supply balance, pinpointing exactly where capacity might exceed local demand.

**Preparing for a Quarterly Investor Briefing**

An energy analyst uses this MCP to run get_petroleum_summary and combine it with get_petroleum_consumption. The agent generates a full report detailing how specific product sectors (like aviation or transport) are consuming oil relative to overall production.

**Assessing localized fuel shortages**

A local gas station owner uses this MCP to query get_petroleum_prices, filtering for diesel and gasoline retail prices in their specific county. This allows them to immediately compare current costs against historical averages.

**Evaluating national strategic oil reserves**

A government advisor uses this MCP by querying get_petroleum_stocks and then comparing those results with data from get_crude_production. This provides a clear picture of the nation's immediate reserve capacity versus its current output.

# Patterns to Avoid

### Assuming global price correlation

✗ AVOID

A user checks only WTI prices and assumes Brent is moving in tandem, ignoring regional market variations.

✓ INSTEAD

Always use the get_petroleum_prices tool to compare both WTI Cushing and Brent spot prices simultaneously. This provides a much clearer picture of global price divergence.

### Ignoring reserve status

✗ AVOID

An analyst only looks at current production data (get_crude_production) without checking the Strategic Petroleum Reserve levels.

✓ INSTEAD

Before making any supply-side decisions, run get_petroleum_stocks. The SPR level is a critical buffer that dictates market stability regardless of daily output.

### Focusing only on crude oil

✗ AVOID

A planner checks raw crude imports but forgets to check the refined product movements.

✓ INSTEAD

Use get_petroleum_trade and get_crude_imports together. This ensures you track not just the raw material, but also how much finished fuel is moving.

## The Right Fit

Use this MCP if your job requires knowing exactly where oil supply meets demand: tracking price changes (get_petroleum_prices), measuring inventory levels (get_petroleum_stocks), or modeling cross-border movements (get_petroleum_trade). It’s ideal for commodity traders and energy analysts. Don't use it, though, if your goal is geopolitical prediction—the MCP gives you the facts; it doesn't tell you which country will start a conflict next year. If you only need to know what *will* happen (prediction), you need advanced simulation tools instead of raw data feeds.

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# EIA Petroleum Oil Market Intelligence: Tracking U.S. Crude Production and Reserves

Manual oil market analysis means jumping between the EIA website, downloading CSVs for state-by-state production totals, then finding a separate report to check Strategic Petroleum Reserve levels. You spend hours correlating these data points just to answer: 'How much crude is actually available?'

With this MCP, your agent handles it all. It queries get_crude_production and cross-references those results with get_petroleum_stocks in minutes. You don't just get a number; you get the complete picture of supply depth.

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# EIA Petroleum Oil Market Intelligence: Mapping Global Trade Routes and Imports

Before this, tracking global energy movement required manually pulling data on imports by country from one source, then looking at tanker movements in a completely different database. It was slow, inconsistent, and prone to missing key details like API gravity or sulfur content.

Now, using the get_crude_imports tool, your agent pulls all that granular trade detail together. You immediately know which countries are sending what grade of oil, making global risk assessment incredibly fast.

# EIA Petroleum Oil Market Intelligence: 8 Data Functions for Energy Supply

Access eight specific functions to retrieve critical data points on crude pricing, production volumes, refinery operations, and global petroleum trade movements.

| # | TOOL | DESCRIPTION |
|---|---|---|
| 01 | `get_petroleum_prices` | Retrieves current and historical spot prices for WTI, Brent, gasoline, diesel, heating oil, and other petroleum products by area. |
| 02 | `get_petroleum_summary` | Pulls the weekly status report covering the balance of supply and demand, including production totals, imports/exports, stocks, and consumption. |
| 03 | `get_crude_production` | Provides data on U.S. crude oil output levels and reserves across various states and districts. |
| 04 | `get_refinery_operations` | Delivers metrics regarding refinery capacity usage, input processing volumes, and product yields. |
| 05 | `get_petroleum_trade` | Gathers detailed information on petroleum imports, exports, and the movements of oil through pipelines and tankers globally. |
| 06 | `get_petroleum_stocks` | Lists current commercial product stocks alongside the official Strategic Petroleum Reserve inventory. |
| 07 | `get_petroleum_consumption` | Shows how petroleum products are being consumed and sold, categorized by specific sector and usage type. |
| 08 | `get_crude_imports` | Provides a breakdown of crude oil imports by country, company source, product grade, and API gravity. |

# See It in Action

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

**U** What's the difference between WTI and Brent prices today?

**Crude Oil Spot Prices (Daily)**

| PRODUCT | CUSHING, OK (WTI) | BRENT CRUDE | CHANGE % |
|---|---|---|---|
| Today's Price | $78.26/bbl | $81.15/bbl | N/A |
| Previous Day | $77.89/bbl | $80.50/bbl | +0.47% |

The spread between the two benchmarks is currently $2.89/barrel, which usually indicates supply concerns in North America.

**U** What's the current status of the SPR and overall supply?

**Strategic Petroleum Reserve (SPR) Status**

Current Stock: 372 million barrels
Total Capacity: 714 million barrels
Utilization Rate: 52%

The weekly summary shows that global consumption is up 4% year-over-year, but U.S. production rates are stable. This suggests the market has absorbed recent supply shocks effectively.

U Give me a breakdown of Asian crude imports this quarter.

**Asian Crude Imports by Quarter**

| COUNTRY/REGION | LATEST MONTH (BBL/D) | 12-MONTH AVG (BBL/D) | API GRAVITY | SULFUR CONTENT |
|---|---|---|---|---|
| China | 345,000 | 360,000 | 30.1° | 1.9% (sour) |
| India | 280,000 | 275,000 | 29.5° | 2.1% (sour) |

China remains the largest importer by volume, but India's reliance on medium-grade crude is increasing.

# Frequently Asked Questions

01 **How can I check current WTI and Brent oil prices using EIA Petroleum — Oil Market Intelligence MCP?**

You get immediate access to the most up-to-date spot pricing for both benchmarks. The agent returns a clear comparison, including previous day's closing rates and percentage changes, allowing you to quickly gauge market movement.

02 **Do I need multiple tools to know about U.S. crude supply?**

No, the EIA Petroleum — Oil Market Intelligence MCP handles this by providing dedicated functions for get_crude_production and get_petroleum_stocks. You can run a single query to see both current output figures and reserve levels side-by-side.

03 **Can I track how much oil different countries are importing?**

Yes, you can use the MCP to get detailed crude imports by country. You'll receive data on volume (barrels/day), company source, and crucial technical details like API gravity and sulfur content.

04 **What is the best way to model refinery capacity? (EIA Petroleum — Oil Market Intelligence MCP)**

You use the get_refinery_operations tool. It pulls data on utilization rates, which tells you how close refineries are running to maximum capacity, helping predict potential bottlenecks in fuel supply.

05 **Does EIA Petroleum — Oil Market Intelligence MCP cover diesel and gasoline prices?**

Absolutely. The get_petroleum_prices tool lets you filter for retail fuel costs, giving you regional breakdowns of both gasoline and diesel at the pump, which is vital for local planning.

# 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-petroleum-oil-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 Petroleum — Oil 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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