GridMind
AI Systems Inc.

AI MODEL DEVELOPMENT

Advancing intelligent energy systems through real data, cutting-edge AI, and continuous innovation.

WHITE PAPER

RENEWABLE ENERGY ASSETS

DATA-DRIVEN INTELLIGENCE

AI MODEL DEVELOPMENT

REAL INFRASTRUCTURE. REAL DATA. REAL INTELLIGENCE. REAL IMPACT.

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GridMind AI Systems Inc.

REAL DATA • REAL INTELLIGENCE • REAL IMPACT

01 | Executive Summary

In its early stage, the company focused on the field of renewable energy generation, investing in, constructing, and operating sustainable energy projects such as wind power, solar power, and hydropower. Through the construction and continuous operation of its own power plants, GMS has established a stable electricity production capacity and accumulated multidimensional data resources covering the entire generation process, equipment operation, and environmental factors. This phase not only provided the company with tangible energy assets but also built a long-term valuable data system.

GMS is currently developing an artificial intelligence (AI) model framework centered on key applications in the energy sector, including, but not limited to, power generation forecasting, load prediction, intelligent scheduling optimization, and equipment fault prediction. Through continuous data training and model iteration, the company is gradually building intelligent systems with self-learning and self-optimization capabilities, making energy production and management processes more precise, efficient, and controllable.

Compared with traditional AI companies, GMS has significant differentiating advantages. The company not only possesses complete AI R&D capabilities but also has direct access to real-world energy production scenarios and data sources, enabling models to be continuously trained and validated in actual environments. This “data–model–application” closed-loop system gives GMS long-term competitiveness in model accuracy, system stability, and commercialization potential.

From a business model perspective, GMS retains revenue from energy generation while gradually expanding the commercialization of its AI systems, including intelligent energy management systems, scheduling optimization systems, and industry solution offerings. This drives the company’s evolution from a single energy revenue

structure to a dual-engine model of “Energy + AI technology services.”

Looking ahead, GMS will continue to increase investment in AI research, promote the large-scale application of AI technology across energy, electricity, and broader industrial scenarios, and gradually build standardized, platform-based intelligent system capabilities. The company has planned to launch its initial public offering (IPO) in 2027 to further strengthen its capital base and accelerate global market expansion and technology ecosystem development.

02 Industry Background and Development Trends

2.1 Global Energy Transition Trends

In recent years, the global energy system has been steadily transitioning toward cleaner sources. Driven by climate change and sustainable development goals, countries are continuously increasing the share of renewable energy in their energy mix. International climate frameworks, exemplified by the Paris Agreement, have further accelerated the development of wind power, solar power, and hydropower.

During this process, the structure of power systems has also evolved. The traditional centralized generation model is gradually shifting toward a more diversified and distributed approach. The large-scale integration of renewable energy makes the overall system cleaner but also introduces new operational characteristics. Compared with traditional thermal power, renewable energy is more affected by weather and natural conditions, resulting in output fluctuations. As the proportion of renewables increases, this uncertainty has become a significant factor impacting system operation.

2.2 Structural Challenges in the Energy Industry

With changes in the energy mix, power systems face higher operational requirements. Instability on the generation side makes achieving supply-demand balance more complex. When output fluctuates, the system needs stronger regulation capabilities to maintain stable operation.

Meanwhile, the parallel integration of multiple energy forms transforms scheduling from a relatively simple allocation of electricity into a dynamic decision-making problem involving multiple variables and constraints. In such cases, traditional approaches relying on experience and fixed rules increasingly struggle to adapt to complex environments.

Energy systems continuously generate large volumes of data during operation, including generation output, equipment status,

and meteorological information. However, in practice, these data are often not integrated in a unified manner, making it difficult to convert them into actionable decision support. At the same time, as the scale and distribution of power plants expand, traditional operation and maintenance models face growing efficiency and cost pressures.

Overall, the core issues in the energy industry are gradually shifting from single-capacity and equipment problems to system efficiency and decision-making capability challenges.

2.3 Technology-Driven Evolution

In this context, data-driven technologies are beginning to play an increasingly important role in the energy sector. In recent years, methods based on machine learning and deep learning have been gradually applied to power generation forecasting, scheduling optimization, and equipment management.

By analyzing historical and real-time data, these technologies improve the ability to anticipate generation fluctuations and load trends, providing more valuable guidance for system operation. In equipment management, continuous monitoring of operational status helps identify potential issues early, reducing risks.

With the growth of data volumes and computing capabilities, these technologies are gradually evolving from auxiliary tools into essential support for system operations, enhancing the stability and controllability of energy systems in complex environments.

2.4 Industry Development Trends

From an overall perspective, the energy industry is evolving toward more systematic and intelligent operations. Industry focus is gradually extending from simple generation capacity to the overall optimization of system efficiency.

Coordinated operation of multiple energy sources is becoming mainstream, and complementarities between different energy types help enhance stability. At the same time, the role of data within the system continues to grow, becoming a key factor influencing decision-making and operational efficiency.

It is foreseeable that future energy systems will gradually evolve from standalone physical infrastructure to complex systems supported by data and technology. In this process, companies that possess both energy assets and technological capabilities are more likely to gain a competitive advantage in the industry.

03 Company Overview

3.1 Company Background

GridMind AI Systems Inc. (hereinafter referred to as GMS) was established in August 2024 and is headquartered in the United States. It is an innovative technology company integrating clean energy and artificial intelligence (AI). The company was founded during a period of ongoing global energy transition and accelerated technology-driven development, aligning its growth trajectory closely with industry trends.

In its early stage, GMS focused on the renewable energy sector, undertaking projects in wind, solar, and hydropower generation. By engaging directly in energy production, the company gradually established stable electricity output capabilities and accumulated foundational experience in power plant construction, operational management, and system scheduling.

This initial phase not only formed the company’s industrial base but also provided real-world scenarios and data sources to support subsequent technological development, enabling GMS to pursue technology upgrades from the energy side.

3.2 Business Development and Current Layout

As its energy operations stabilized, GMS began expanding its technological capabilities, extending its business structure toward higher value-added directions. Currently, the company has developed a dual-layered layout, with energy generation as the foundation and technology R&D as the extension.

On the energy side, GMS continues to advance the construction and operation of its own power plants, forming a relatively stable generation system through a combination of diverse energy projects. At the same time, data generated during plant operation—including generation metrics, equipment performance, and environmental data—gradually becomes a critical data asset for the company.

On the technology side, GMS has assembled a professional team

comprising software engineers, AI R&D engineers, and systems specialists, focused on data processing, model development, and system engineering. The establishment of this technology framework enables the company to conduct in-depth data analysis and model applications within energy scenarios.

At this stage, GMS's business focus is gradually transitioning from single-source energy production toward the integration of "Energy + Technology."

3.3 AI R&D Progress

After completing foundational capabilities, GMS officially launched AI model development, entering the stages of model training and optimization. This R&D work relies primarily on the data accumulated from energy systems, focusing on power generation forecasting, load analysis, scheduling optimization, and equipment condition monitoring.

Unlike general-purpose data environments, energy systems feature strong continuity, complex structure, and high real-time requirements, placing higher demands on model design and training. Modeling based on real operational data allows systems to be validated and iterated under near-real conditions, improving both model stability and applicability.

As training progresses, these models gradually develop an understanding of energy system operational states and begin to provide decision support in localized scenarios. This marks the company’s transition from a phase of data accumulation to a phase of data application and capability output.

3.4 Core Advantages and Development Path

At its current stage, GMS has developed business characteristics combining energy infrastructure and technological capabilities. Compared with traditional energy companies, the company enjoys greater flexibility in data acquisition and technology application. Compared with pure technology companies, it possesses real-world operational scenarios and continuous data sources.

This dual foundation enables GMS to construct a relatively complete data loop within energy systems—from data generation and processing to application. Model training and optimization can be conducted continuously in operational environments, gradually enhancing overall system capabilities.

From a development perspective, the company has progressed from energy infrastructure construction to technology expansion and is evolving toward a data- and model-driven core. This

transition does not replace its original business but deepens and upgrades it based on existing operations.

3.5 Development Stage and Future Plans

Currently, GMS is transitioning from foundational construction to capability enhancement. Energy operations provide stable support while technology R&D continues to advance, forming a gradually synergistic relationship.

In the future, the company will continue to deepen the application of AI technology in energy scenarios and promote the deployment of related systems on a larger scale. When conditions allow, it will progressively deliver its technological capabilities and solutions externally, expanding the scope of application.

04 Energy Infrastructure and Operations

4.1 Energy Business Foundation

Since its founding, GridMind AI Systems Inc. (GMS) has centered its business around renewable energy generation. Rather than entering the market directly from a technology perspective, the company chose to start with the actual industrial process of energy production. By participating in power plant construction and operation, GMS gradually established a solid foundation in real-world energy business.

Currently, GMS is developing projects in wind, solar, and hydropower across multiple regions. By combining different types of energy, the company has created a complementary generation structure, mitigating the impact of fluctuations from any single energy source.

The focus at this stage is on building a sustainably operating generation system rather than merely making project investments. Through direct participation in energy production, GMS has gradually formed stable electricity output capabilities and accumulated operational experience. This foundation distinguishes

GMS from companies that rely solely on technology concepts, providing clear, tangible business support.

4.2 Power Plant Construction and Operations

At the execution level, GMS has participated in the construction and operation of multiple energy projects. During project development, the company conducts comprehensive assessments of resource availability, system configuration, and long-term operational stability, ensuring that power plants can operate continuously in real-world conditions.

During the operational phase, GMS continuously monitors plant performance, including generation efficiency, equipment status, and external environmental factors. Daily management and

maintenance ensure that systems maintain stable output under varying conditions.

As the number of plants increases, operational complexity rises. Differences in the operational characteristics of various energy types require more detailed and precise management. This process not only reflects the accumulation of engineering and operational expertise but also deepens the company's understanding of the actual operational logic of energy systems.

This practice-based accumulation differs fundamentally from approaches that rely solely on simulations or theoretical models, providing a realistic foundation for future capability extension.

4.3 Data Sources and Operational Foundation

During continuous power plant operations, large volumes of frontline data are generated and consolidated, forming a critical foundational resource for the company. These data come directly from production processes and cover generation output, equipment operational status, and meteorological conditions.

Because the data originate from real operational environments, they are relatively continuous and complete, accurately reflecting the behavior of energy systems under varying conditions. For

example, generation data reveal output fluctuations over different time periods, equipment data track system state changes over long-term operation, and meteorological data provide context for understanding these variations.

4.4 Practical Significance of the Energy Business

For GMS, the energy business is not only the starting point of the company's early development but also a key foundation in its overall strategy. On one hand, power generation provides stable operational support, giving the company an independent industrial base. On the other hand, the real operational environment offers irreplaceable scenarios for subsequent technological development.

By participating directly in the operation of energy systems, GMS can continuously validate and refine its management practices in real conditions. This hands-on experience provides a competitive advantage in understanding system complexity. At the same time, the continuously generated data serve as essential input for future technological applications.

05 | AI-Driven Energy Systems

5.1 Strategic Transformation Background

Amid the increasing complexity of the global energy system, relying solely on generation capacity is no longer sufficient to create a long-term competitive advantage. As the share of renewable energy rises, the operational focus of power systems is gradually shifting from “producing electricity” to “efficiently managing and distributing electricity.” In this process, the system’s reliance on forecasting and real-time decision-making capabilities has significantly increased.

GridMind AI Systems Inc. (GMS) has evolved its development path within this context. After establishing its energy infrastructure, the company did not remain at the level of traditional operations. Instead, leveraging operational experience and accumulated data, it has shifted focus toward understanding and optimizing the operation of energy systems.

This transition signifies that the role of the energy business within the company is evolving. Its function is no longer limited to electricity production but is increasingly becoming a core source of

data and application scenarios, forming the foundation for future capability development.

5.2 Integration Path of Energy and AI

GMS's current development strategy is to integrate AI technology into its existing energy systems for continuous optimization and restructuring. This process does not start from scratch; rather, it builds on the data generated through long-term plant operations to gradually model and refine the system.

In practice, AI integration focuses on key areas of the energy system:

- **Generation Forecasting:** Estimating future output based on historical generation data and meteorological information.
- **Load Analysis:** Modeling electricity demand changes to improve supply-demand matching efficiency.

- **Scheduling Optimization:** Dynamically adjusting power allocation under multi-variable conditions.
- **State Recognition:** Identifying potential anomalies and risks based on equipment operational data.

These capabilities do not exist in isolation but are gradually formed in real operational environments. Models are continuously trained with incoming data and refined during application, enhancing their adaptability to the system.

Overall, the key to this integration path is that technology is embedded within the energy system and evolves alongside its operation, rather than being applied externally.

5.3 Data Loop and System Capabilities

As the energy system continues to operate, data accumulates and models iterate, gradually forming a closed-loop structure from data generation to application feedback. In this process, data are no longer merely historical records but actively inform system operations.

By analyzing data, models can anticipate future system states and, to some extent, influence operational decisions. Over time, this

capability strengthens, enhancing system stability and adaptability in complex environments.

Compared with approaches that rely on external data or static models, this closed-loop system—built on real operational conditions—is more effective at maintaining model relevance. Continuous interaction between data and models also constitutes a key source of long-term capability accumulation for the company.

5.4 From Energy Operations to System Capability Output

In traditional models, the value of energy companies is primarily reflected in generation capacity and asset size. At GMS's current stage, system operational capability is gradually becoming a core element. As models mature, their value extends from internal optimization to broader application scenarios.

The capabilities GMS has developed have potential external applications, including:

- Converting scheduling and optimization capabilities into standardized systems.
- Offering services externally via software or platform solutions.
- Replicating and applying systems across different energy scenarios.
- Extending capabilities to other industries requiring complex decision-making.

Through this process, the company develops not just project-specific experience but an evolving system capability. This enables a shift in business structure from “asset-dependent” to “capability-dependent.”

Energy infrastructure remains an important support, but its role is gradually shifting from a single revenue source to a foundation for technological capability and business expansion.

5.5 Strategic Positioning and Long-Term Value

Overall, GMS is evolving from a company rooted in renewable energy generation to a technology-driven enterprise centered on data and models. The energy business provides continuous

operational environments and data sources, while AI technology builds understanding and optimization capabilities on top of this foundation.

This model establishes a close linkage between energy and technology, providing a differentiated positioning in the industry. Compared with traditional energy companies, GMS emphasizes system efficiency and decision-making capabilities. Compared with pure technology companies, it benefits from real operational scenarios and continuous data sources.

As data volumes increase and model capabilities improve, this integrated approach is expected to continuously strengthen, gradually forming a stable technical system and application capabilities. In this process, energy is no longer just an end goal but becomes a crucial foundation supporting higher-level capability development.

06 AI Model R&D Framework

6.1 Overview of the R&D Framework

After establishing energy infrastructure and stable data sources, GridMind AI Systems Inc. (GMS) gradually built an AI R&D framework specifically for energy scenarios. This framework is not isolated but tightly integrated into the operation of energy systems and is driven by real business needs.

Unlike general-purpose model development paths, GMS's technology framework uses energy data as core input and is problem-oriented. Through continuous data accumulation and model iteration, the system's understanding of complex operational environments is gradually enhanced. The process emphasizes applicability in real-world scenarios rather than performance in theoretical or experimental settings.

Structurally, the R&D framework covers multiple stages, including data processing, model training, and application deployment, enabling continuous operation and optimization of models within energy systems.

6.2 Data Framework and Processing Mechanism

Data forms the foundation of model development. As energy systems operate continuously, various types of data are collected and accumulated, forming continuous time series. These data include generation output, equipment operational status, and external environmental conditions.

Before being fed into model training, data must be organized and processed to ensure usability and consistency. Differences in time granularity and structure across sources require alignment and standardization, creating a unified data input system.

6.3 Model Design and Core Directions

Once the data foundation is established, GMS designs models addressing key challenges within energy systems. Different models

target different application scenarios, with the overall goal of enhancing the system's predictive and responsive capabilities.

Current R&D focuses on the following directions:

- **Generation Forecasting Models:** Estimating output fluctuations for wind and solar under various conditions.
- **Load Forecasting Models:** Analyzing trends in electricity demand.
- **Scheduling Optimization Models:** Allocating power resources under multiple constraints.
- **State Recognition Models:** Analyzing equipment operations to identify anomalies and potential risks.

These models are designed collaboratively within a unified framework, enabling inter-module interaction to support more complex system applications.

6.4 Model Training and Iteration Mechanism

Model effectiveness depends on continuous training and optimization. As operational data is updated, models can continuously learn. Incorporating new data into the training process allows models to adjust parameters and progressively enhance predictive and decision-making capabilities.

6.5 Current Progress and Capability Formation

Currently, GMS's AI model development has entered the training and optimization stage, with some models already functioning in specific scenarios. As data scales increase and model structures improve, predictive and analytical capabilities are gradually strengthened.

Through this process, the company has established a complete pathway from data acquisition and model training to real-world application. This capability manifests not only in individual models but also in the coordinated operation of the entire system.

As models continue to iterate and application scope expands, capabilities will gradually extend from local optimization to system-level optimization. On this basis, the company is expected to build a more complete technical framework to support future application expansion and capability deployment.

07 Products and Solutions

7.1 Overview of the Product System

With the gradual establishment of energy infrastructure and the AI R&D framework, GridMind AI Systems Inc. (GMS) has begun productizing its capabilities. The company does not offer technology as standalone modules but develops holistic solutions aligned with the operational needs of energy systems.

The current product portfolio focuses on critical areas such as generation forecasting, scheduling optimization, and equipment management. These functions are integrated within a unified framework to create system-wide synergy in real operations, rather than being applied in isolation. The design emphasizes compatibility with actual energy environments, allowing products to directly support plant operations and energy management processes.

7.2 Intelligent Energy Management System

The intelligent energy management system forms the core of GMS's current product portfolio. Built on real-time data, it continuously monitors generation, equipment status, and external

environmental conditions, dynamically assessing system performance through model analysis.

In practice, the system provides visualization and analysis of current operational status and gradually develops predictive capabilities for future conditions, assisting operational decision-making. As data accumulates and models are optimized, the system evolves from passive information support to active optimization, enhancing management efficiency.

The system is scalable across multiple plants, providing a foundation for large-scale deployment.

7.3 Scheduling Optimization and Forecasting System

With the rising share of renewable energy, matching generation with consumption has become increasingly complex. GMS

developed a scheduling optimization and forecasting system to improve energy allocation efficiency and system stability.

By analyzing historical and real-time data, the system models generation output and load variations and dynamically allocates resources under multiple constraints. In multi-energy operation scenarios, the system reduces the impact of fluctuations and improves overall operational efficiency.

As model capabilities advance, the system has the potential to evolve from decision support to higher levels of automation.

7.4 Automated Operations and Equipment Management

As plant scale, equipment quantity, and geographic distribution increase, traditional operation and maintenance approaches face efficiency and cost limitations. To address this, GMS developed an automated operations system to enhance precision in equipment management.

The system continuously analyzes equipment data to detect potential anomalies and provide early warnings. This reduces the impact of unexpected failures and enhances overall stability. By integrating data analysis into operations, management gradually shifts from reactive response to proactive anticipation.

7.5 Solutions and Application Extension

Based on these product capabilities, GMS is gradually building a solution ecosystem for different scenarios. These systems can be applied both internally and externally.

Within the energy sector, these solutions serve power companies and operators to enhance system efficiency and management capabilities. Moreover, the systems' forecasting and scheduling capabilities can be extended to other industries requiring complex decision-making.

As the product system matures, it will evolve from individual modules to standardized, platform-based systems, improving replicability and scalability.

08 Business Model

8.1 Overview of the Business Model

GridMind AI Systems Inc. (GMS) has built its business model on the integration of energy infrastructure and AI capabilities. The company does not position itself as a pure energy producer but is gradually transforming into a technology-driven, system-oriented company based on its energy operations.

At the current stage, energy operations provide a stable operational foundation and cash flow while supplying continuous data and application scenarios for the technology system. As AI models and product systems mature, these capabilities are being transformed into externally deliverable systems and services, evolving the company's business structure from a single revenue stream to a diversified model.

From a developmental perspective, GMS is forming a dual-engine model of **"energy support + technology value-add."**

8.2 Energy Business Revenue

Energy operations currently represent the company's most direct source of revenue. Through the operation of both self-owned and

participatory power plants, GMS earns income from electricity sales, which provides relatively stable cash flow.

Beyond revenue, energy operations provide a long-term operational environment, enabling continuous access to real-world data and system optimization. Compared with models relying solely on external data or project-based approaches, this asset-backed operational model offers greater stability.

As the scale of power plants increases, energy operations will continue to serve as a foundational support for the company over the long term.

8.3 AI Systems and Technology Services

Building on its energy business, GMS is progressively productizing and service-enabling its AI capabilities. As model training and system development advance, these technologies are increasingly

ready for external deployment.

Current technology service offerings include:

- Intelligent energy management and scheduling systems.
- Deployment of forecasting and optimization model capabilities.
- Customized solutions for specific scenarios.
- Long-term collaborative partnerships through continuous service.

Compared with energy operations, technology services offer higher added value and scalability. Once products stabilize, replication costs are relatively low, allowing promotion across different clients and scenarios to achieve scale effects.

8.4 Platform Capabilities and Expansion Potential

With continued data accumulation and model capability enhancement, GMS is laying the foundation for platform-based development. By integrating different functional modules into a unified system, these capabilities can be applied over a wider scope.

At this stage, the business model transitions from single-system output to platform-based services, enabling clients to access

multiple functions within a unified framework. This capability also has potential to extend to other industries requiring complex scheduling and forecasting.

Platform development enhances replicability and long-term business stability.

8.5 Evolution of Revenue Structure

Overall, GMS's revenue structure is gradually evolving. Initially dominated by energy generation revenue, the company introduces technology services, eventually developing a diversified structure centered on platform capabilities.

This evolution can be summarized as:

- **Early stage:** Energy revenue dominates, establishing stable cash flow.
- **Mid stage:** Energy and technology services coexist, increasing technology revenue share.
- **Later stage:** Platform-based capabilities form the core of sustainable revenue.

This evolution allows the company to maintain stability while supporting continuous growth.

09 Future Outlook

Amid the ongoing global energy transition and continuous technological evolution, the energy industry is shifting from a traditional production-centric model toward a new stage focused on system efficiency and operational capability. The widespread adoption of clean energy enhances sustainability but also significantly increases system complexity, requiring stronger forecasting, scheduling, and overall coordination capabilities.

In this context, the role of data and technology is becoming increasingly prominent. Energy systems are no longer just physical infrastructure consisting of generation equipment and grids; they are evolving into complex systems that require continuous analysis and dynamic optimization. This transformation provides significant development opportunities for companies with data processing and modeling capabilities.

GridMind AI Systems Inc. (GMS) has charted its growth path within this trend. The company leverages its energy business to obtain real operational data and, on this basis, advances AI model development and application. As data volumes grow and model

capabilities improve, the operation of energy systems gradually shifts from reliance on experience and rules to an analysis- and judgment-driven approach.

Looking ahead, the company will continue to deepen the integration of energy and technology. On the energy side, it will advance project construction and operations to secure data sources and application scenarios. On the technology side, it will refine model systems and platform capabilities to enable broader deployment. The interaction between these two dimensions will drive the overall enhancement of capabilities.

As technology matures, the systems are expected to scale from serving individual power plants to larger energy networks, gradually achieving standardization and platform capabilities. In this process, the company’s business model will transition from being

asset-driven to capability-driven, making technology a key source of long-term value.

Over the long term, the boundary between energy systems and data systems will blur. Energy will not only serve as a production and consumption resource but also as a vital carrier for data generation and application. Leveraging this transformation, GMS aims to continuously accumulate and expand system capabilities, gradually forming a future-ready technology framework.

Aligned with the global trend toward clean and intelligent energy, GridMind AI Systems Inc. is committed to building energy systems underpinned by data and models, creating a continuously evolving capability base. Guided by long-term development goals, the company is steadily advancing along the energy-technology integration path to establish a stable and extensible competitive position in the industry.