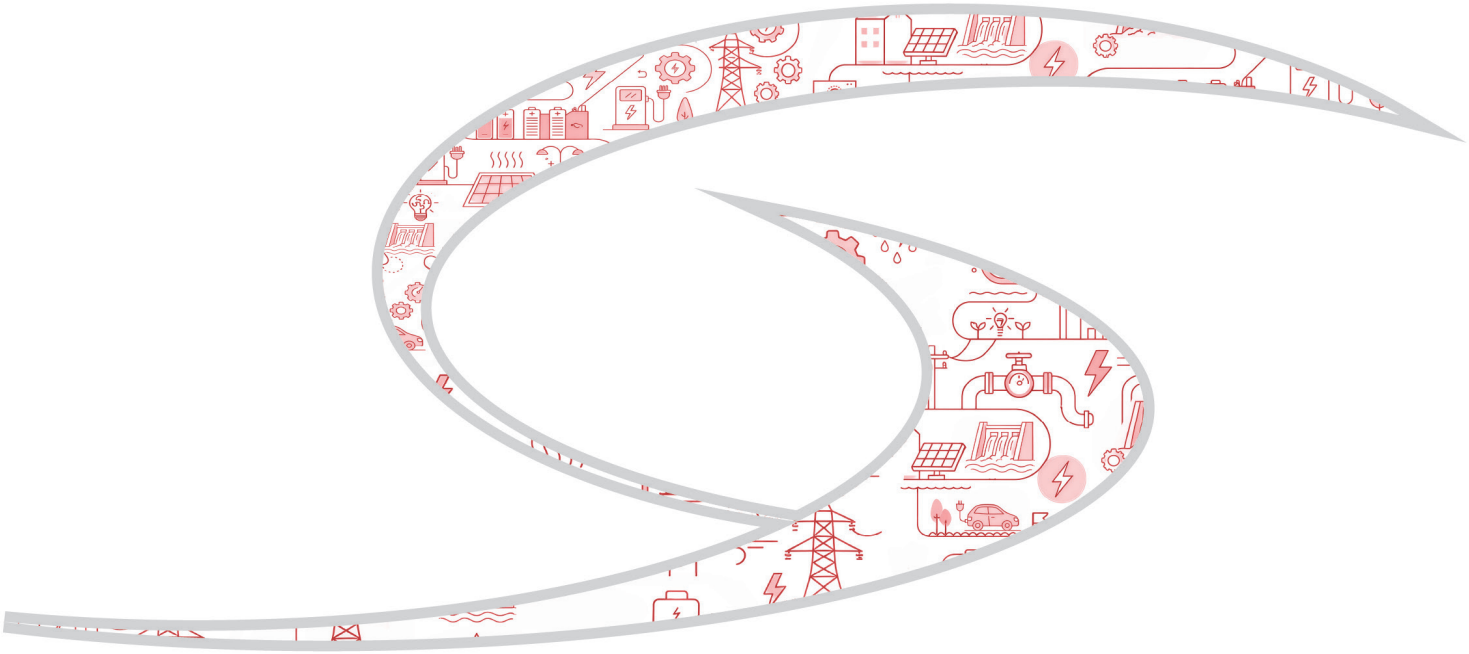
Suruhanjaya Tenaga
Energy Commission

2001 - 2026



SURUHANJAYA TENAGA STRATEGIC PLAN 2026-2030

A Sustainable Future for Energy Consumers

Be Energy smart

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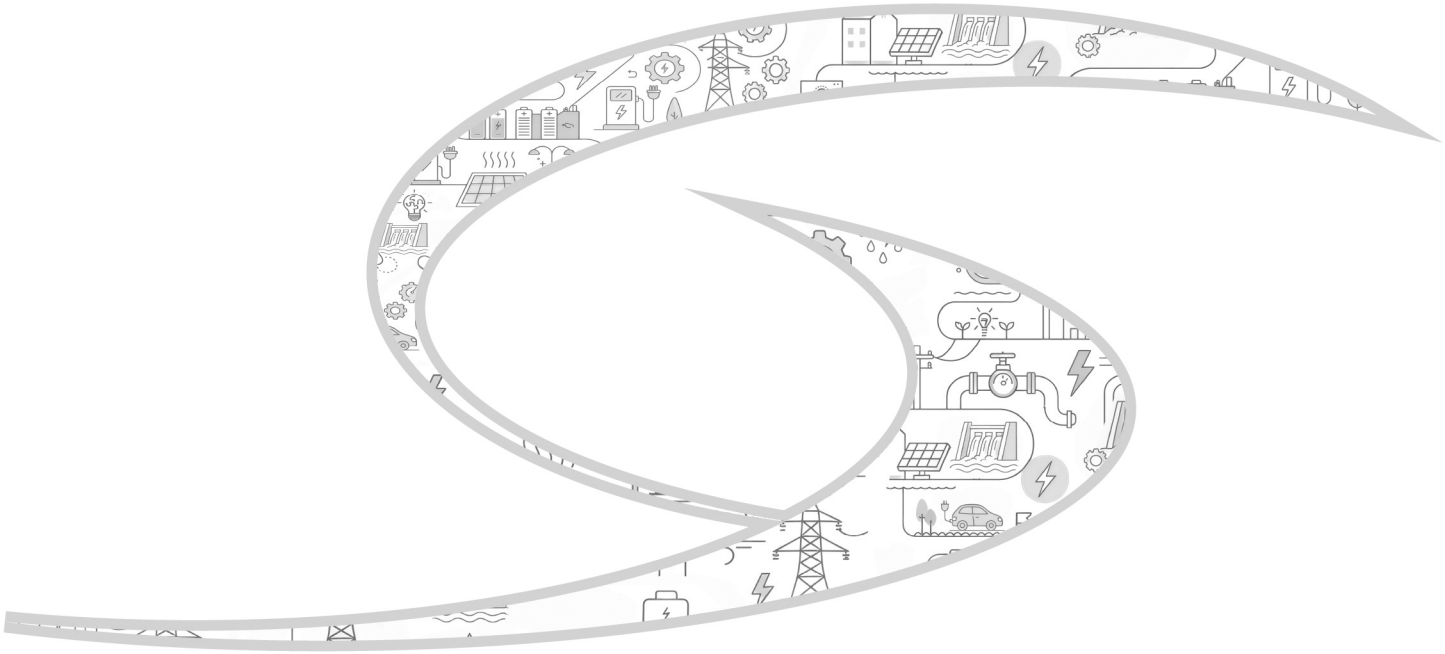

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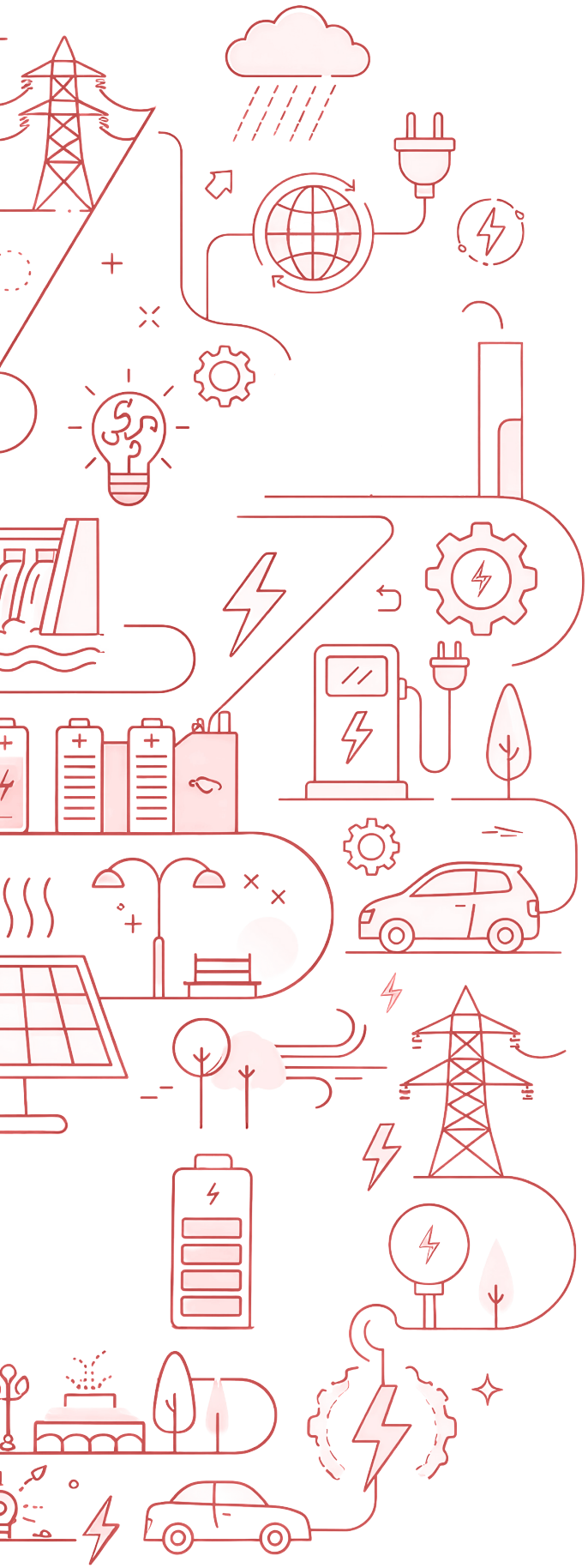


CONTENT

Glossary

Abbreviation	Definition
APG	ASEAN Power Grid
ASEAN	Association of Southeast Asian Nations
BESS	Battery Energy Storage System
CRESS	Corporate Renewable Energy Supply Scheme
DER	Distributed Energy Resources
EECA	Energy Efficiency and Conservation Act 2024
EUP	Energy Using Products
EV	Electric Vehicle
ESA	Electricity Supply Agreement
GHG	Greenhouse Gas
GIRS	Grid Interconnection and Reliability Standards
ICPT	Imbalance Cost Pass-Through
IBR	Incentive-Based Regulation
LTMS-PIP	Laos–Thailand–Malaysia–Singapore Power Integration Project
LSS	Large Scale Solar
MEPS	Minimum Energy Performance Standards
MW	Megawatt
NETR	National Energy Transition Roadmap
NEP	National Energy Policy
PV	Photovoltaic
RE	Renewable Energy
RP4	Regulatory Period 4
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SOI	Strategic and Operational Initiative
ST	Suruhanjaya Tenaga (Energy Commission of Malaysia)
TPA	Third-Party Access
TOU	Time-of-Use Tariff

Executive Summary

Suruhanjaya Tenaga Strategic Plan 2026–2030

Malaysia's energy sector is entering a period of significant structural transformation. Rising electricity demand, increasing renewable energy deployment, technological innovation, evolving market structures, and growing regional interconnection are reshaping the way energy systems are planned, regulated, and delivered.

At the same time, consumers are becoming more diverse in their energy needs and expectations. Households, industries, commercial users, prosumers, and emerging digital infrastructure, such as data centres, require energy systems that are reliable, affordable, and increasingly sustainable.

In this environment, the role of Suruhanjaya Tenaga (ST) as Malaysia's energy regulator becomes increasingly critical. ST must ensure that electricity and piped gas supply systems remain safe, secure and reliable, while supporting market development, protecting consumers and facilitating the nation's energy transition. The Strategic Plan 2026–2030 sets out the direction and priorities that will guide ST in fulfilling this responsibility over the next five (5) years.

The Plan is anchored on ST's Statement of Purpose:

"Committed to serve the interests and well-being of energy consumers in ensuring secure, equitable and clean supply of energy."

To deliver this purpose, the Strategic Plan adopts a 5–15–2030 strategic framework, consisting of:

5 Strategic Objectives

15 Strategic and Operational Initiatives (SOIs)

Sector outcomes targeted by **2030**

The five Strategic Objectives define the core regulatory priorities of ST:

Ensure Safety, Security and Reliability of Energy Supply and System
Strengthening regulatory standards, system planning and compliance enforcement to maintain reliable electricity and gas supply.

Ensure Energy is Efficiently Used and Economically Viable for All Consumers
Promoting efficient energy consumption, fair tariff structures, and greater consumer awareness.

Ensure a Competitive, Fair and Efficient Energy Market
Strengthening economic regulatory frameworks and facilitating transparent and efficient market arrangements.

Promote Technology Innovation and Capability Development
Supporting research, regulatory experimentation and strategic collaboration to facilitate emerging energy technologies.

Provide Advisory on Energy Law and Policy
Supporting the Government in the development of national energy policy and legislative frameworks through regulatory insights and technical expertise.

These objectives are implemented through 15 Strategic and Operational Initiatives covering regulatory development, market oversight, innovation programmes, regional cooperation, and policy facilitation.

The Strategic Plan is further supported by institutional transformation initiatives aimed at strengthening ST's organisational capability, including digitalisation, governance enhancements, workforce development, and financial sustainability.

Throughout the strategic period, ST will continue to operate at the intersection of three (3) important stakeholder interests:

- Government policy direction and national development goals
- Industry investment and operational requirements
- Consumer expectations for reliable, affordable, and transparent energy services

Balancing these interests while addressing the broader **Energy Trilemma of security, affordability, and sustainability** will remain a central responsibility of ST.

By implementing this Strategic Plan, ST aims to strengthen Malaysia's energy regulatory ecosystem and support the development of an energy system that is:

- Reliable and resilient
- Efficient and economically sustainable
- Transparent and fair for consumers
- Responsive to technological innovation
- Aligned with Malaysia's long-term energy transition goals

Guided by this Strategic Plan, ST will continue to play a central role in ensuring that Malaysia's energy sector develops in a manner that supports national growth while safeguarding the interests and well-being of energy consumers.

Chairman's Foreword

The energy sector stands at the centre of Malaysia's economic growth, social development, and environmental sustainability agenda. Over the coming decade, structural transformation across the electricity and gas industries will accelerate, driven by renewable energy expansion, regional market integration, digitalisation, decarbonisation commitments, and rising consumer expectations.

In this evolving landscape, the role of ST becomes increasingly critical. As the statutory regulator for electricity and piped gas supply in Peninsular Malaysia and Labuan, ST is responsible for safeguarding energy security, ensuring market integrity, and protecting the interests of consumers. The Strategic Plan 2026–2030 articulates ST's commitment to fulfil this mandate with clarity, discipline, and foresight.

This Plan is anchored on a clear purpose: to serve the interests and well-being of energy consumers by ensuring secure, equitable and clean energy supply. It outlines the strategic priorities that will guide regulatory decisions, institutional strengthening, and sector engagement over the next five years.

The period 2026–2030 will demand regulatory agility without compromising discipline. Renewable energy penetration will continue to increase. Cross-border electricity interconnections under the Association of Southeast Asian Nations (ASEAN) initiatives will expand. Market frameworks will evolve to support competition and efficiency. At the same time, affordability, safety, and system reliability must remain uncompromised.

This Strategic Plan reinforces ST's commitment to:

- Maintaining high standards of safety and reliability;
- Ensuring cost-reflective and transparent tariff regulation;
- Supporting financially viable utilities while protecting consumers;
- Facilitating innovation within a structured regulatory environment;
- Strengthening institutional governance and accountability.

The Plan also integrates a structured Transformation Programme to enhance organisational capability, digital readiness, financial sustainability, and stakeholder engagement. Through this Strategic Plan, ST positions itself as a forward-looking, data-driven, and trusted regulator capable of balancing energy security, economic viability, and sustainability objectives in the national interest.

On behalf of the Commission Members, I express full confidence that the leadership and officers of ST will execute this Plan in accordance with ST's core values of professionalism, integrity, excellence and a strong sense of fairness and fair play.

Together, we will ensure a sustainable future for energy consumers.

Datuk Seri Asri bin Hamidon
Chairman
Suruhanjaya Tenaga

Chief Executive Officer's Message

The Strategic Plan 2026–2030 marks an important step in strengthening the role of ST as Malaysia's energy regulator. The sector is undergoing rapid transformation driven by renewable energy expansion, increasing electrification, digitalisation of energy systems, and evolving market structures. These developments require regulatory approaches that are forward-looking, disciplined and responsive to emerging risks and opportunities.

This Strategic Plan provides a clear framework to guide ST's regulatory priorities and organisational development over the next five (5) years, anchored in the aspiration to deliver a Sustainable Future for Energy Consumers.

At the centre of the Plan is the "5–15–2030" strategic framework — five (5) Strategic Objectives, delivered through 15 Strategic and Operational Initiatives (SOIs), with measurable sector outcomes to be achieved by 2030. This framework strengthens organisational clarity, accountability and focus across ST.

The Plan is supported by institutional strengthening initiatives, including a revised organisational structure, stronger cross-divisional coordination and enhanced performance monitoring mechanisms. Together, these measures will enable ST to deliver regulatory outcomes that support system reliability, transparent tariff frameworks, responsible integration of renewable energy and robust regulatory governance.

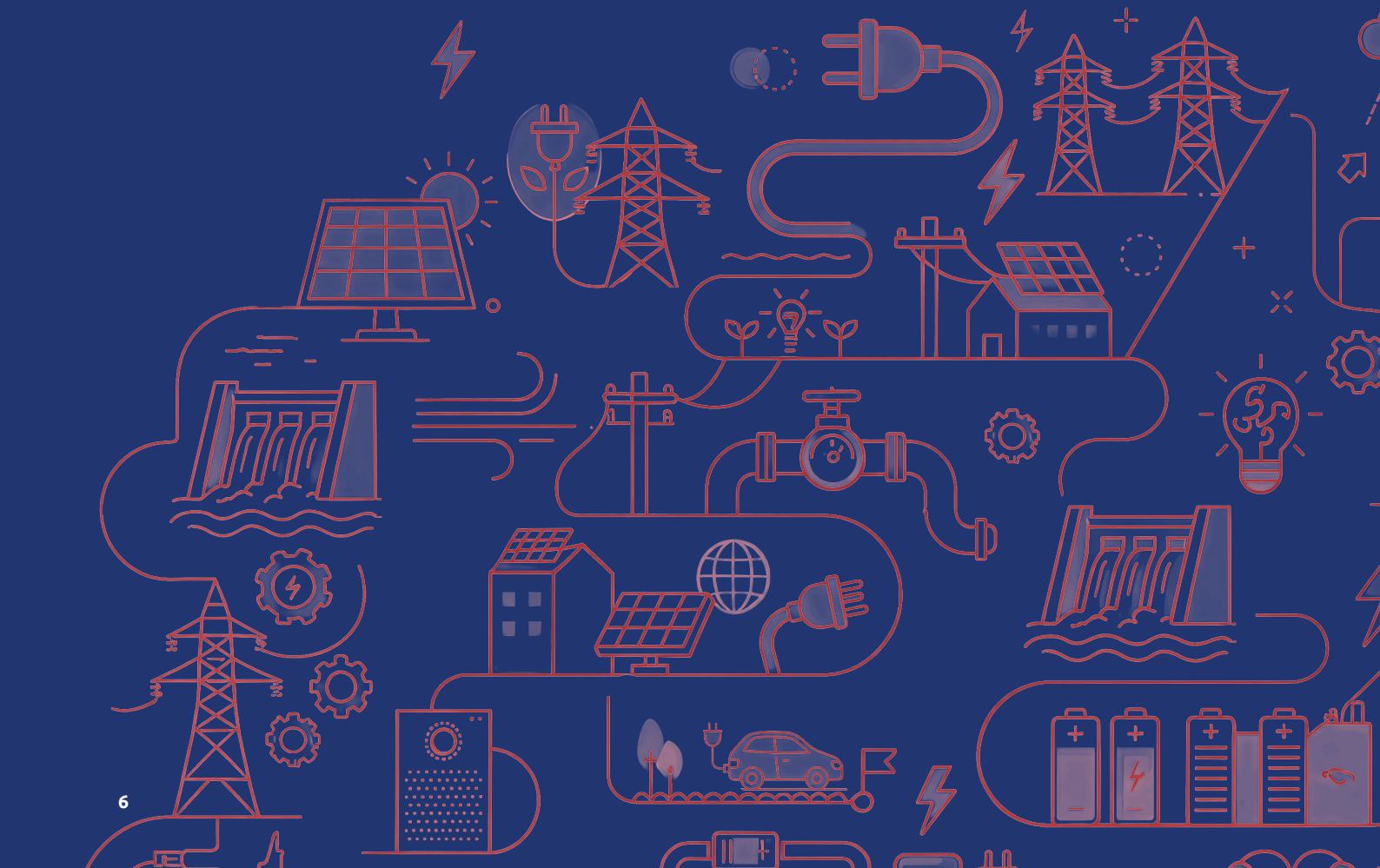
As Chief Executive Officer, I am committed to ensuring that this Strategic Plan is implemented with discipline, transparency and accountability. Through strong leadership and professional excellence, ST will continue to protect consumers, support national development and contribute to Malaysia's energy transition.

Guided by the 5–15–2030 strategic framework, we will continue working towards a Sustainable Future for Energy Consumers.

Siti Safinah binti Salleh
Chief Executive Officer
Suruhanjaya Tenaga

CHAPTER 1

Energy Sector Landscape



Global Energy Transition

The global energy sector is undergoing a deep structural shift. Countries are trying to decarbonise their energy systems while maintaining the security of supply and protecting consumer affordability. This transition is being shaped by several forces occurring simultaneously: rising electricity demand, accelerating renewable energy deployment, greater digitalisation of energy systems, and increasing pressure to reduce carbon emissions.

Electrification is expanding across transport, buildings, industry and digital infrastructure. At the same time, solar photovoltaic (PV) has become a major growth driver in new power capacity. Yet the transition is not a simple replacement of fossil fuels with renewable energy. Power systems are becoming more complex, more decentralised, and more dependent on flexible balancing resources, stronger networks, digital monitoring, and updated market arrangements.

These changes have major implications for energy regulators. The task is no longer limited to regulating a stable and predictable utility system. Regulators must now manage a more dynamic environment in which investment needs are rising, technologies are evolving quickly, and consumers are becoming more diverse in how they produce, use, and purchase energy. This means energy regulation must increasingly balance technical reliability, market efficiency, consumer protection, and long-term sustainability at the same time.

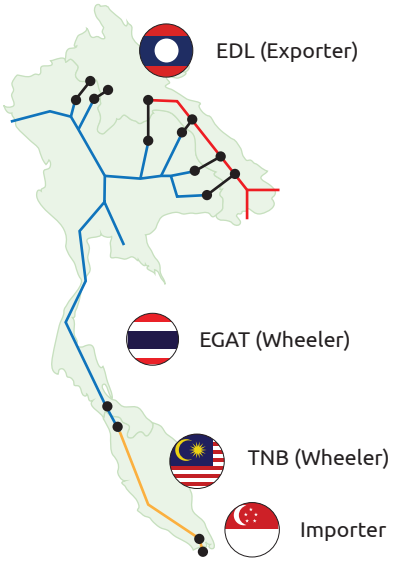
For Malaysia, these global developments are highly relevant. They shape the policy and regulatory environment in which the national electricity and piped gas industries now operate. They also reinforce why a forward-looking and integrated regulatory approach is essential.

Regional Energy Developments in ASEAN

Within ASEAN, energy demand is expected to continue growing alongside economic expansion, industrial development, urbanisation, and rising living standards. As one of the world's fastest-growing regions, Southeast Asia faces a dual challenge: it must expand energy supply to support growth while also strengthening resilience and advancing cleaner energy pathways.

One major regional response has been the push for greater cross-border electricity integration under the **ASEAN Power Grid (APG)** initiative. The APG seeks to strengthen regional interconnection, improve the use of generation resources across borders, and support electricity trade among ASEAN Member States. This creates opportunities to improve system flexibility, reduce supply constraints, and support larger-scale renewable energy development across the region.

A key example is the **Lao PDR–Thailand–Malaysia–Singapore Power Integration Project (LTMS-PIP)**, which has demonstrated the practical feasibility of multilateral electricity trading in ASEAN. Malaysia's participation in this project shows that regional interconnection is no longer only a long-term concept. It is already becoming part of the operating landscape. As regional power trade expands, the role of national regulators becomes more important in coordinating technical rules, commercial arrangements, wheeling issues, and regulatory oversight across borders.



	LTMS 1.0	LTMS 2.0
Commercial Framework	• Energy Wheeling Agreement (EWA) • Malaysia as wheeler	• Energy Wheeling Agreement (EWA) • Supply Agreement • Malaysia as wheeler and balancer and second supplier (up to 200 MW)
Duration	• 22 June 2022–21 June 2024, 2 years	• Malaysia as second supplier: 26 September 2024–21 June 2026 • LTMS: 14 January 2026
Capacity	• up to 100 MW	• up to 200 MW

Figure 1.1: Laos-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP)

Regional integration also changes the meaning of energy security. Security is no longer defined only by domestic generation adequacy. It increasingly includes interconnection readiness, operational coordination, cross-border trading frameworks, and regional trust in regulatory systems. This has direct implications for ST, particularly in relation to market design, grid reliability, cross-border transactions and regional regulatory cooperation.

Peninsular Malaysia's Energy Sector Overview

Malaysia's energy sector remains central to national growth, industrial competitiveness, public welfare, and long-term development. In Peninsular Malaysia, the electricity system is supported by a diversified fuel mix and an extensive transmission and distribution network.

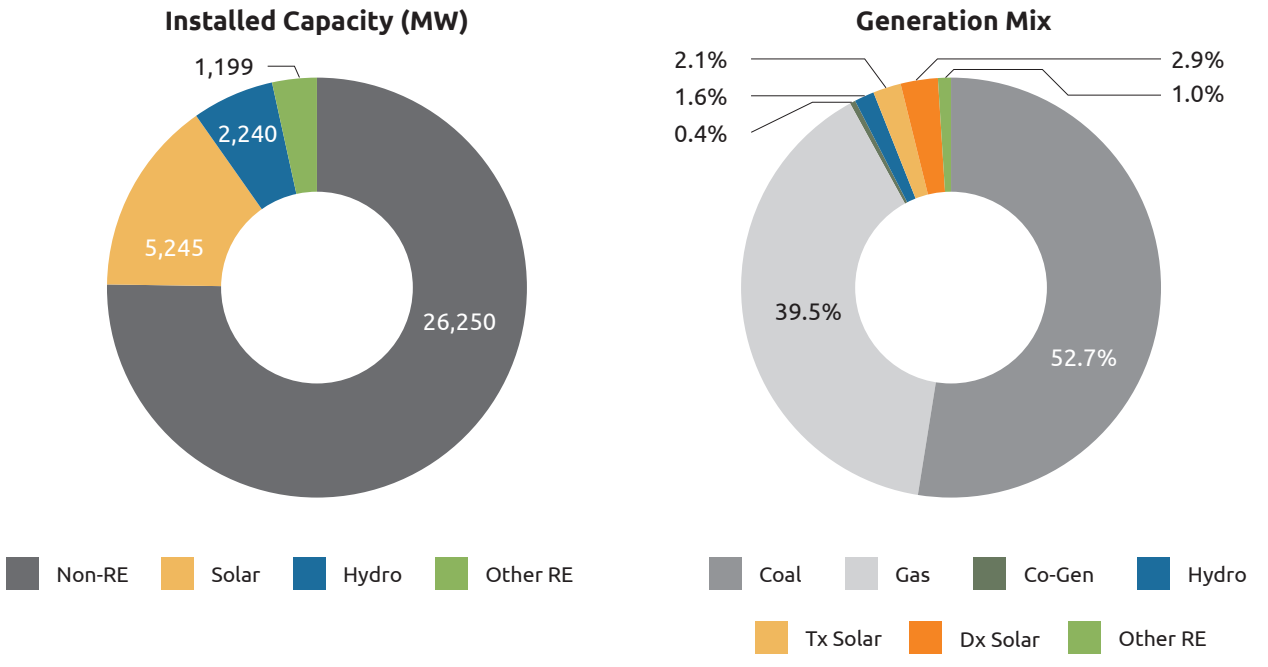


Figure 1.2: Electricity Generation Mix in Peninsular Malaysia (as of December 2025)

In 2025, electricity demand continued to grow, with peak demand in Peninsular Malaysia reaching **21,049 MW**, while the reserve margin stood at **25%**. This indicates that the system remained adequately supplied, but it also signals rising pressure as demand continues to expand, especially from new large-scale users.

The electricity mix remains shaped by both transition and continuity. Renewable energy is growing, but fossil fuels, particularly coal and gas, still play a major role in maintaining adequacy and operational stability. This reflects the current reality of transition: cleaner capacity is expanding, but firm and dispatchable resources are still needed to support reliability.

At the same time, the piped gas sector remains an essential part of the downstream energy landscape. Piped gas supports industrial and commercial activity, provides energy for key users, and continues to play an important role in the broader electricity-gas nexus. Gas infrastructure, including transmission pipelines, regasification-related facilities, city gate stations, and distribution systems, remains important for supply continuity and economic activity. As the energy transition progresses, gas is increasingly viewed not only as a regulated fuel supply chain, but also as a transition support system that may provide balancing value as renewable penetration rises.

Peninsular Malaysia's and Labuan's energy landscape must therefore be read as a dual-sector system. Electricity and piped gas are regulated separately under different legal frameworks, but in practical terms, they are increasingly interconnected. Electricity transition decisions affect gas demand patterns. Gas infrastructure decisions can affect future electricity system flexibility. This makes integrated regulatory understanding more important than before.

The sector also has a strong consumer dimension. Energy supply is not only about macro-level capacity and infrastructure. It directly affects households, commercial users, industrial facilities, prosumers, and increasingly digital economy players that depend on high reliability and predictable service quality. This is why the energy landscape cannot be understood only in technical terms. It must also be understood through the lens of service quality, safety, affordability, and public trust.

Renewable Energy and Energy Transition

Malaysia has adopted a more structured and ambitious energy transition direction through national frameworks such as the National Energy Policy (NEP) 2022–2040 and the National Energy Transition Roadmap (NETR). Together, these frameworks provide the policy direction and implementation pathway for a cleaner and more diversified energy system, while still recognising the need to preserve reliability, affordability and orderly implementation.

The renewable energy agenda is being advanced through multiple programmes and delivery models, such as Large-Scale Solar (LSS), Solar ATAP (previously known as Net Energy Metering (NEM)), battery storage development, and emerging access models such as the Community Renewable Energy Aggregation Mechanism (CREAM), while the wider set of initiatives is outlined in Figure 1.3.

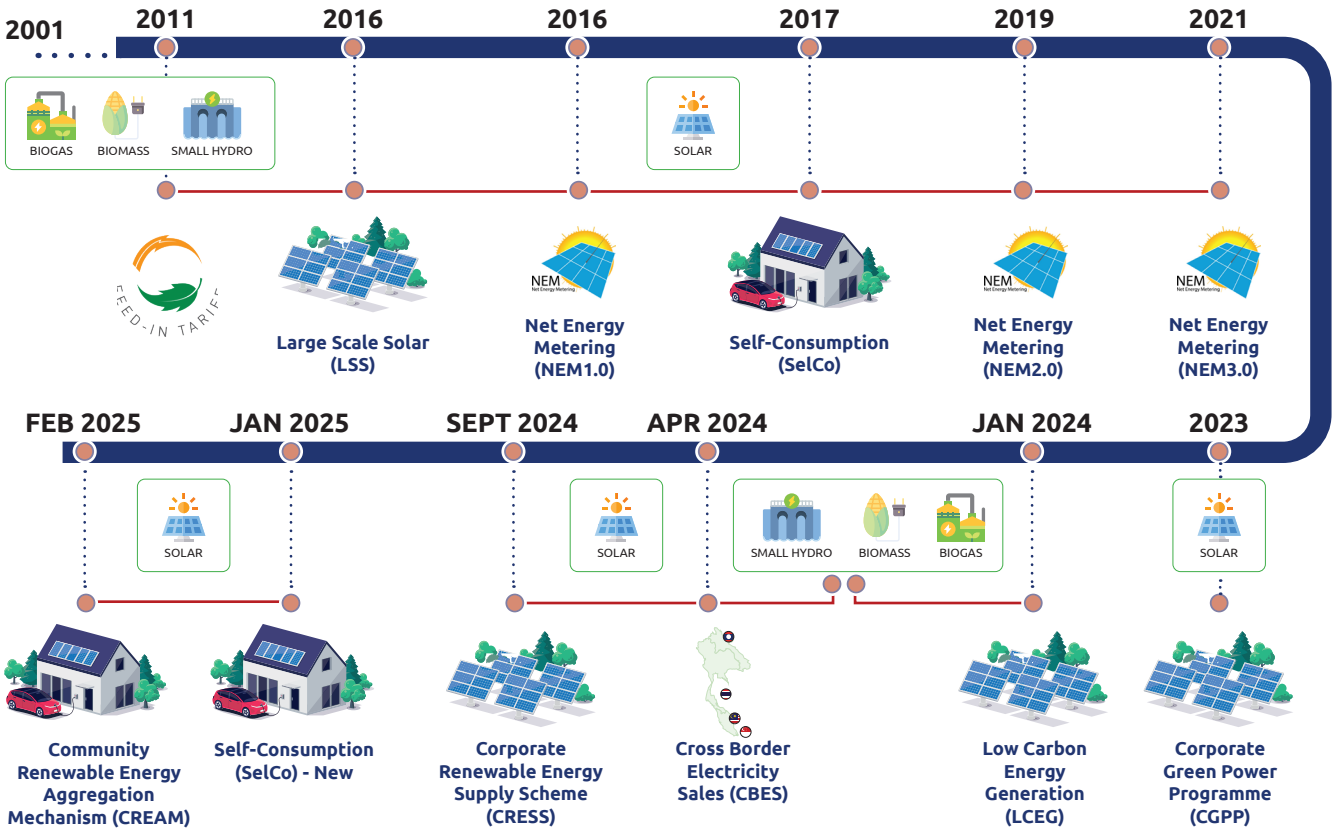


Figure 1.3: The Renewable Energy Agenda's Timeline from 2001 to 2025

As shown in Figure 1.4, the projected electricity mix indicates a gradual increase in renewable energy share from 11% in 2025 to 18% in 2030, 22% in 2035, 27% in 2040, and 39% in 2050. This suggests that renewable deployment is expected to continue expanding through successive programme rounds and implementation mechanisms.

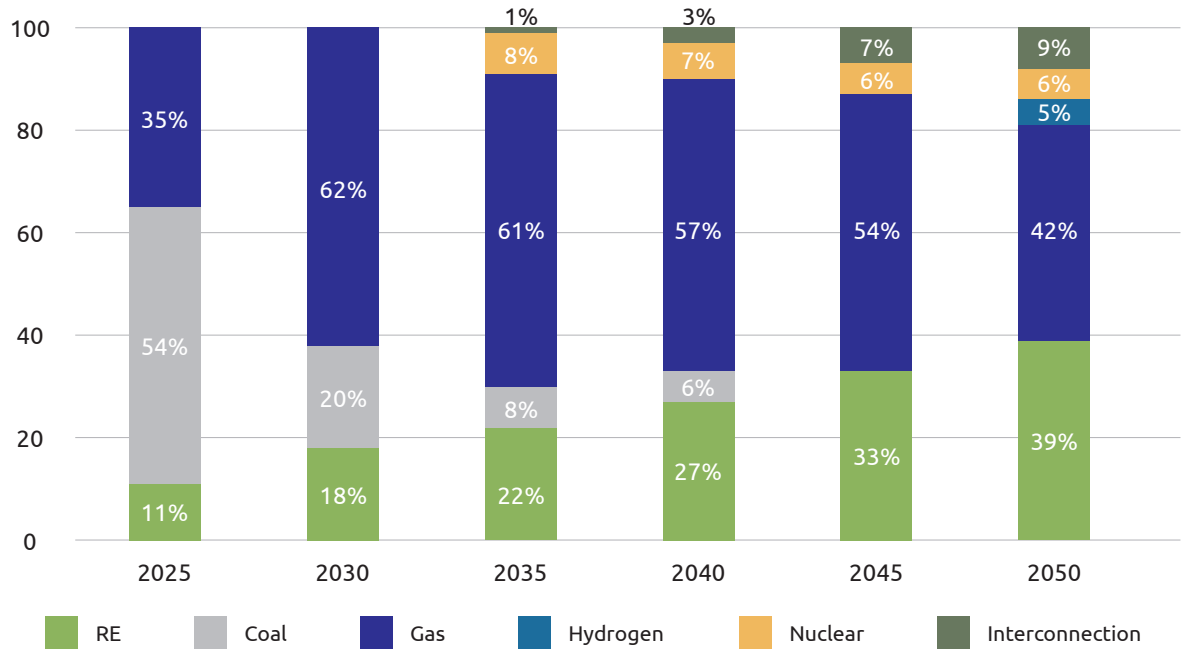


Figure 1.4: Peninsular Malaysia Renewable Energy Projection from 2025

This transition creates opportunities, but it also changes the technical and regulatory character of the electricity system. Renewable energy, especially solar PV, is variable by nature. Its output changes by time of day and weather conditions. As renewable penetration grows, system balancing becomes more important. This increases the need for transmission upgrades, operational flexibility, energy storage, improved dispatch arrangements, and stronger system planning.

The transition also has implications for the gas sector. As renewable penetration rises, gas may continue to play a supporting role as a transition fuel and as a source of flexible firming capacity, subject to policy direction, system needs and economic viability. This means the transition is not only about building more renewable capacity. It is also about how the whole system, including network infrastructure, balancing resources, market signals and downstream gas arrangements, is coordinated.

In this context, sustainability must be understood in operational as well as environmental terms. A sustainable energy transition is not achieved only by increasing renewable capacity. It must also ensure that the system can absorb renewable energy safely, reliably, and at a reasonable cost to consumers.

Emerging Energy Demand Drivers

Malaysia's future energy demand will not be shaped only by traditional economic growth. New demand drivers are emerging and are beginning to change how the energy system must be planned and regulated.

One major driver is the rapid expansion of the digital economy, especially hyperscale data centres. These facilities require continuous, high-quality electricity supply and may contribute significantly to future load growth. Their demand profile differs from conventional consumers because they place high value on uninterrupted service, power quality and predictable long-term access to electricity.

The scale of this emerging demand is already evident in the growth trajectory of data centre development in Malaysia, with approximately 5,662 MW of demand from 58 data centre projects that have signed Electricity Supply Agreements (ESA) expected to materialise by 2030. This suggests that data centres are no longer a marginal or future-only load segment but are becoming a major driver of electricity demand in the present decade. Their rapid expansion will place increasing pressure on generation adequacy, transmission and distribution planning, connection readiness, and long-term system reliability. For regulators and system planners, this means that energy planning can no longer rely only on conventional assumptions about industrial and commercial demand growth. It must also account for concentrated, high-load, and high-reliability consumers whose electricity requirements are both large in scale and urgent in timing.

Another driver is the growth of electrification, particularly through electric vehicles (EVs), distributed energy resources, smart technologies, and storage systems. These developments will alter demand patterns, create new load-management possibilities, and increase the importance of flexible tariffs, smart charging, and system visibility.

At the same time, the consumer base itself is becoming more diverse. The sector no longer serves a single, uniform consumer group. It now includes households facing cost pressure, industrial and commercial users seeking competitive energy costs, prosumers installing distributed solar PV, corporates seeking renewable supply options, and large high-reliability users linked to the digital economy. These groups do not have the same priorities. Some are most sensitive to cost. Some are most concerned with service quality. Others prioritise sustainability, procurement flexibility, or transparency.

This increasing consumer complexity has important regulatory implications. It means that the energy landscape must be analysed not only in terms of supply and infrastructure, but also in terms of fairness, service quality, transparency and differentiated user needs. It also means future planning must consider both electricity and piped gas service quality, because reliability failures, safety incidents, or poorly communicated pricing reforms can quickly erode public trust.

As energy use becomes more complex, safety considerations also become more important. More installations, more technologies, more decentralised assets and more third-party activity around infrastructure all increase the regulatory burden of oversight. This is especially relevant in both electricity and piped gas, where asset integrity, competent operation, inspection, and enforcement remain fundamental.

Implications for Energy Regulation

The developments outlined above show that Malaysia's energy sector is no longer operating in a simple or static environment. The system is becoming more decentralised, more digital, more interconnected and more exposed to competing pressures. This creates a broader regulatory agenda for ST.

First, **security and adequacy** remain core concerns. Electricity demand is rising. New categories of large users are emerging. Renewable energy is expanding, but balancing resources and network upgrades must keep pace. In parallel, the piped gas sector must continue to support safe and reliable downstream supply while adapting to changing market and infrastructure needs.

Second, **reliability and service quality** are becoming more important, not less. As consumers become more dependent on stable energy supply, system interruptions, poor quality of service, and infrastructure weaknesses carry greater economic and social consequences. Reliability must therefore remain a central regulatory priority across both electricity and piped gas.

Third, **affordability and economic efficiency** will continue to shape regulatory decisions. The transition requires investment, but those costs must be managed carefully. Tariff frameworks must remain transparent, fair, and sustainable. This includes balancing utility viability, market development, and consumer protection, especially for vulnerable groups and users affected differently by pricing reform.

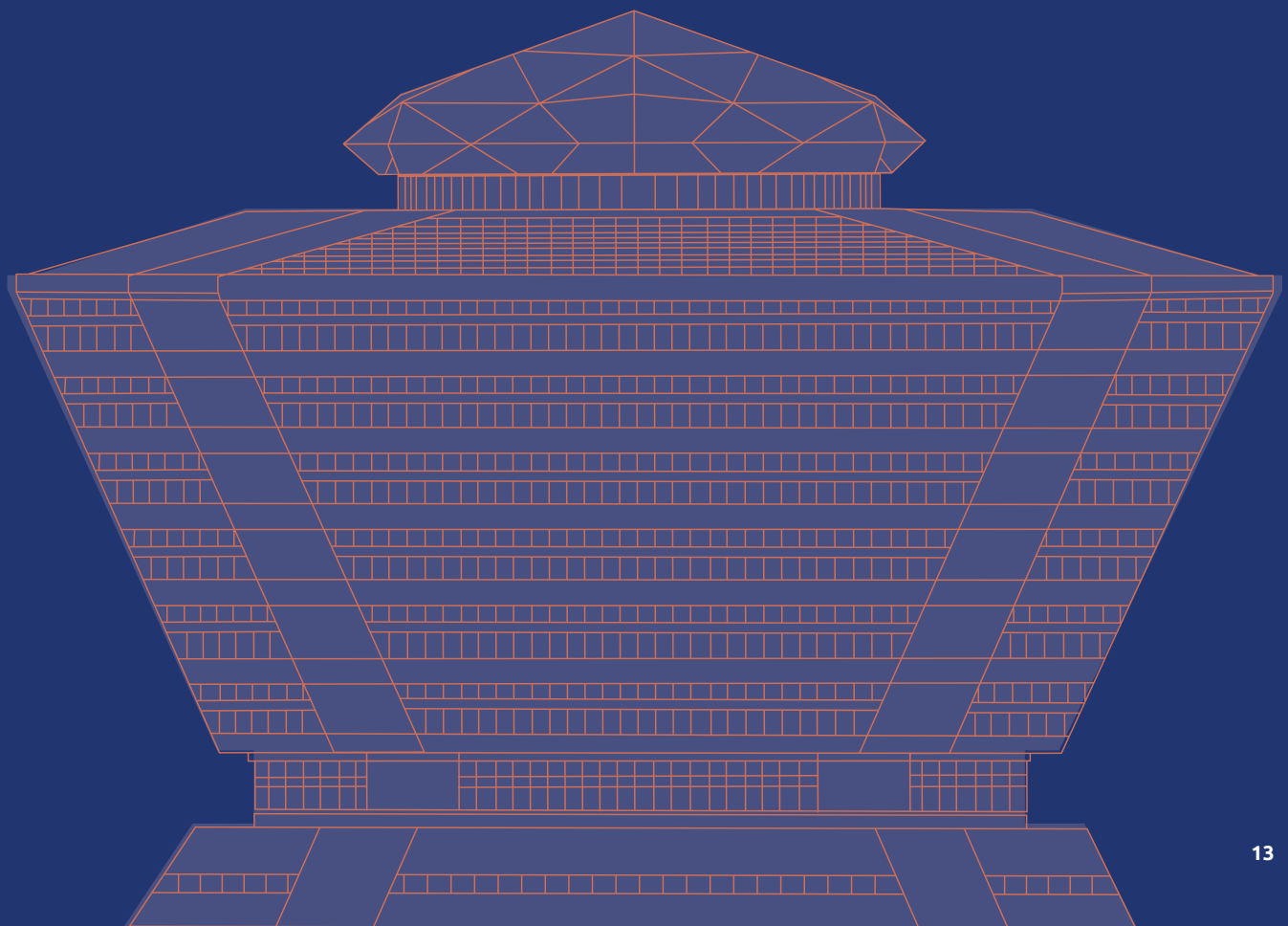
Fourth, **sustainability and market reform** must be pursued in an orderly manner. Renewable energy integration, third-party access models, corporate green supply schemes, and new technologies all require updated regulatory frameworks. Reform must be sufficiently progressive to enable innovation but sufficiently disciplined to preserve system integrity and public confidence.

Fifth, **safety and enforcement** must remain foundational. A more complex energy system creates a wider risk surface. The need for competent persons, strong technical standards, inspections, compliance monitoring, and enforcement action will only grow as the sector evolves.

Taken together, these trends show why ST's role is becoming broader and more demanding. The energy landscape now requires a regulator that can respond across technical, economic, safety and market dimensions in an integrated way. This leads directly to the next chapter, which explains ST's statutory mandate, regulatory scope, and core functions across the electricity and piped gas supply industries.

CHAPTER 2

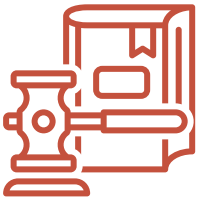
Role of Suruhanjaya Tenaga



Establishment and Legal Mandate

ST is the statutory regulatory authority responsible for regulating the electricity and piped gas supply industries in Peninsular Malaysia and Labuan. ST was established under the Energy Commission Act 2001 [Act 610] to ensure that the energy sector operates safely, efficiently, and in the best interests of consumers.

In carrying out its regulatory responsibilities, ST exercises its functions pursuant to the following principal legislation:



Electricity Supply Act 1990 [Act 447]

Gas Supply Act 1993 [Act 501]

Energy Efficiency and Conservation Act 2024 [Act 861]

In addition to these Acts, ST administers subsidiary legislation, regulations, industry codes, technical standards, and guidelines issued pursuant to these statutory frameworks. Through these legal mandates, ST regulates the technical, safety and economic aspects of the electricity and piped gas supply industries to ensure that energy systems remain secure, reliable, safe and economically sustainable.

While national energy policies are formulated by the Government, ST functions as an independent regulatory authority responsible for implementing regulatory mechanisms and ensuring compliance by industry participants.

Core Regulatory Functions

ST performs a comprehensive set of regulatory functions across the electricity and piped gas supply industries to ensure that the energy sector operates in a safe, reliable and efficient manner. ST's core responsibilities include:

Technical and Safety Regulation

- Establishing and enforcing technical standards and industry codes
- Ensuring the safe operation of electrical and gas installations
- Regulating competency certification for industry personnel
- Monitoring system reliability and infrastructure integrity

Licensing and Certification

- Issuing and renewing licences for generation, transmission, distribution and gas supply activities
- Certifying competent persons and contractors
- Monitoring compliance with licence conditions

Compliance and Enforcement

- Conducting inspections and investigations
- Taking enforcement actions against non-compliance
- Supporting prosecution under relevant Acts
- Promoting compliance culture across regulated entities

Economic Regulation and Tariff Oversight

- Reviewing and approving tariff structures
- Ensuring cost-reflective and transparent tariff methodologies
- Balancing financial sustainability of utilities with consumer protection
- Monitoring financial performance of regulated entities

Market Development and Planning

- Supporting structured electricity and gas market frameworks
- Facilitating renewable energy integration
- Supporting system planning and adequacy assessments

Consumer Protection and Engagement

- Addressing consumer complaints
- Enhancing transparency in service standards
- Promoting responsible energy consumption

Legal Advisory and Policy Facilitation

- Providing regulatory input on legislative amendments
- Ensuring legal robustness of regulatory decisions
- Supporting the Government in policy implementation

Regulatory Scope and Industry Coverage

ST's regulatory mandate extends across the downstream segments of the electricity and piped gas supply industries.

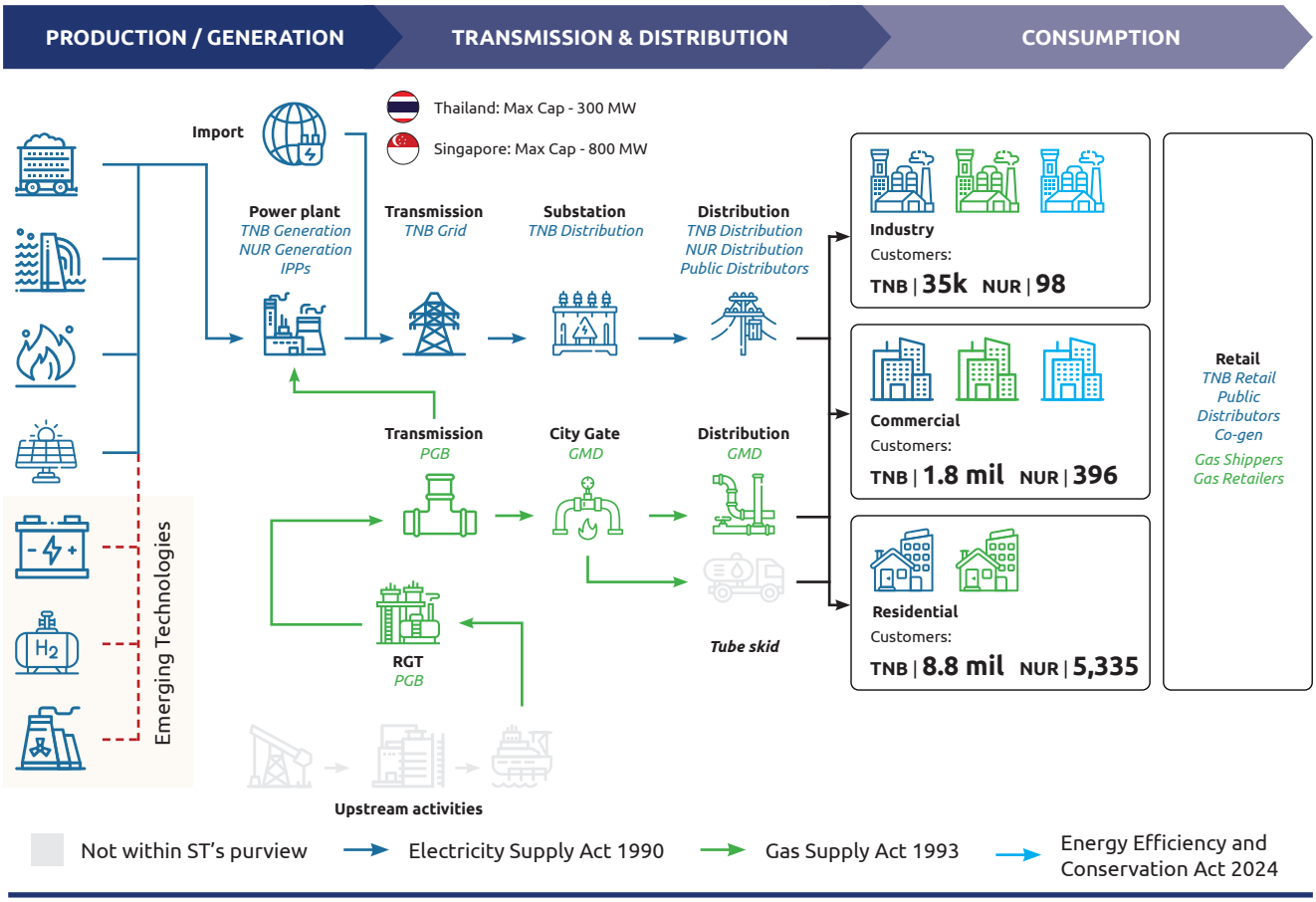
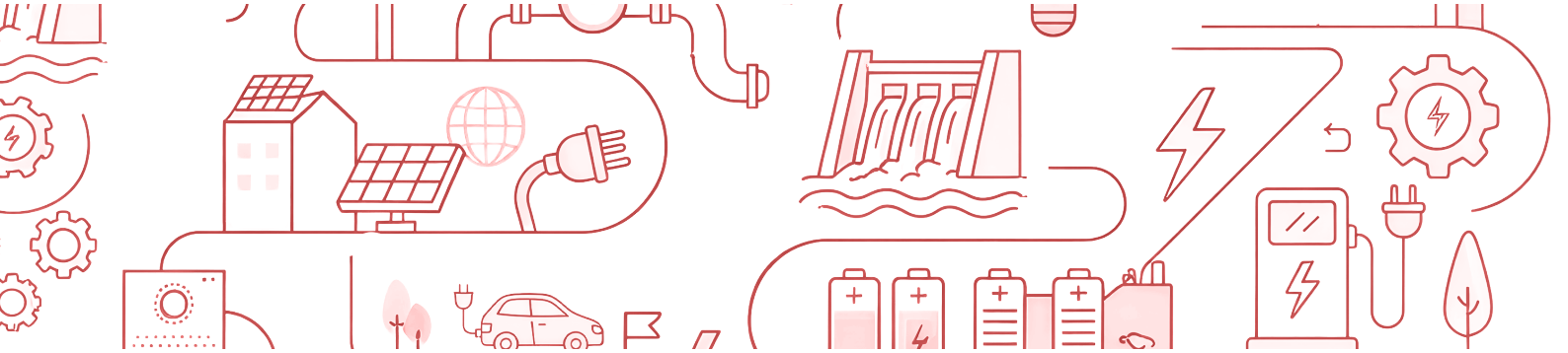


Figure 2.1: ST's Regulatory Purview Across the Energy Value Chain under Relevant Statutory Acts

As illustrated in Figure 2.1, ST exercises regulatory oversight across the energy value chain under three primary legislative frameworks:

- Electricity Supply Act 1990
- Gas Supply Act 1993
- Energy Efficiency and Conservation Act 2024



Institutional Structure and Organisational Strengthening

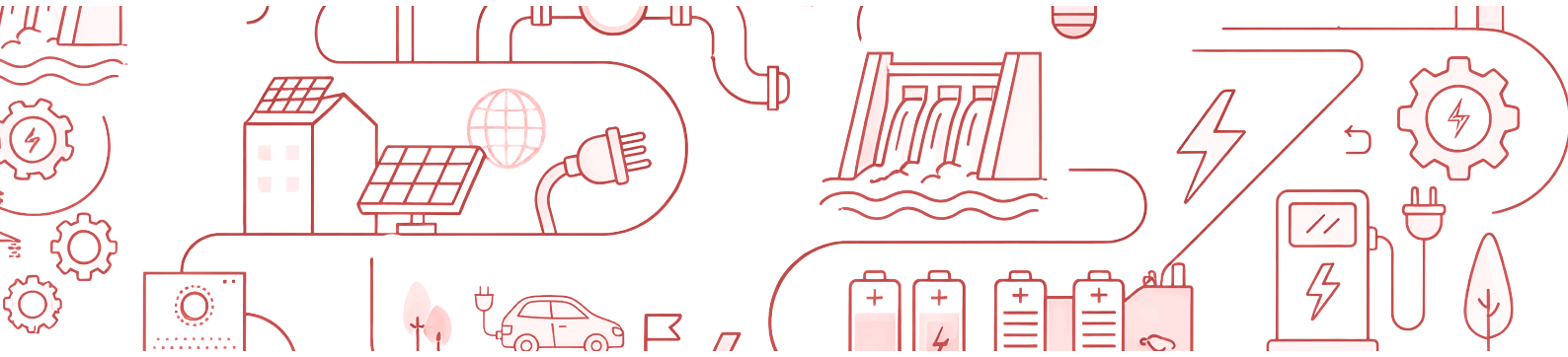
As Malaysia's energy sector evolves, ST continues to strengthen its institutional capability to ensure effective regulatory oversight. In 2026, ST implemented an enhanced organisational structure designed to improve coordination across regulatory functions and strengthen accountability.

The structure aligns regulatory functions across:

- Technical Regulation and Compliance
- Economic Regulation, Markets and Planning
- Corporate Management and Services
- Legal and Secretarial functions
- Regional Offices supporting field-level regulatory implementation

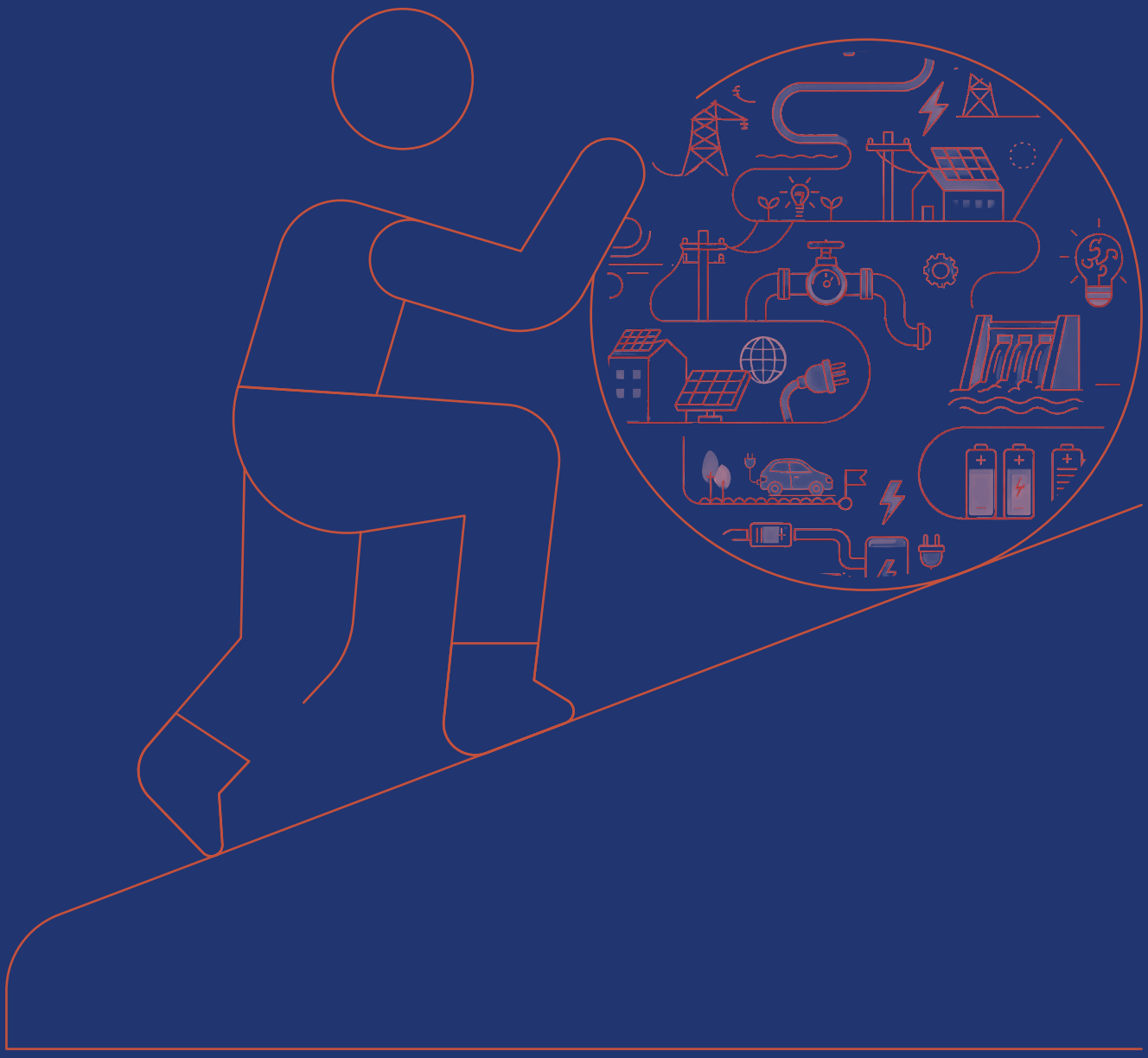
The structural enhancements improve regulatory effectiveness, strengthen enforcement capability, and enable integrated planning across electricity and gas systems. Institutional strengthening efforts are further supported through the Transformation Plan 2026–2030, which focuses on digitalisation, capability development, governance enhancement and stakeholder engagement.

Taken together, ST's broad statutory mandate places ST at the centre of managing the trade-offs shaping Malaysia's energy sector. As outlined in Chapter 1, the sector is being transformed by rising demand, renewable energy expansion, infrastructure pressures, evolving consumer needs, and the continued importance of electricity and the reliability of piped gas systems. This means ST's role extends beyond conventional oversight. It must continuously balance security, affordability, sustainability, safety and market development within an increasingly complex operating environment. These intersecting pressures form the basis of the key challenges discussed in the next chapter.



CHAPTER 3

Our Challenges



Navigating the Energy Trilemma

Malaysia's energy sector is no longer developing along a simple, predictable path. It is now being shaped by many pressures at the same time. Demand continues to grow. Technology keeps changing. Consumers are becoming more diverse. Market arrangements are also evolving. At the same time, the system must continue to remain secure, affordable and sustainable.

This is the essence of the Energy Trilemma, not as a theoretical idea, but as the real condition shaping the sector today. For ST, the challenge is to balance energy security, affordability, and sustainability simultaneously. This means ensuring stable supply and reliable infrastructure, maintaining fair tariffs and consumer protection, and advancing cleaner energy pathways without weakening system reliability.

The energy sector landscape described in Chapter 1 already shows why this balance has become harder. Malaysia's energy system is becoming more decentralised, more digital, more interconnected and more exposed to competing pressures. Renewable energy is expanding. New demand is emerging from hyperscale users and electrification. The consumer base is no longer uniform. Regional integration under ASEAN is advancing. In practical terms, ST is regulating a system that is becoming broader, faster and more complex than before.

Figure 3.1 illustrates this challenge through five (5) key pressure points that now shape the regulatory environment, namely consumer complexity, government policy, emerging technologies, geopolitics, and economic regulations.

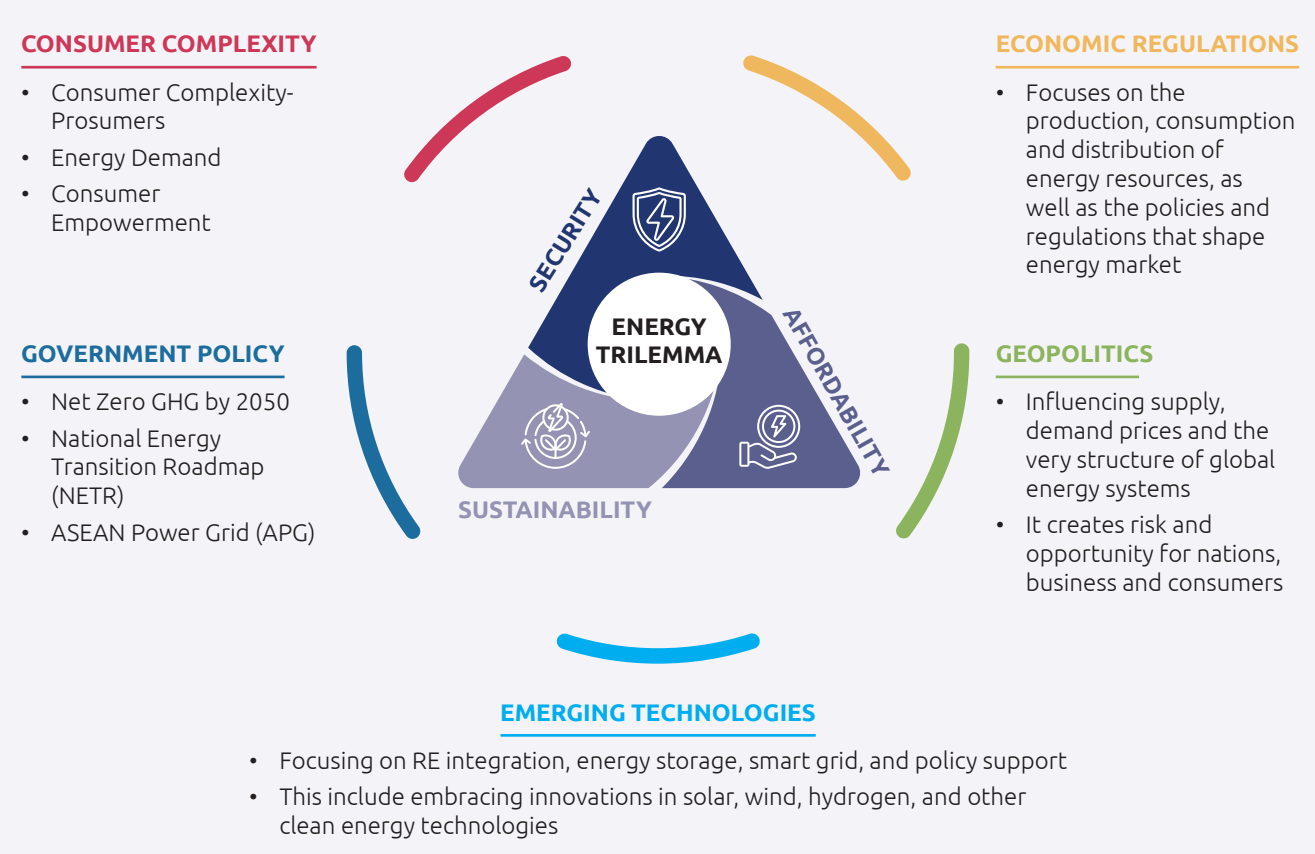


Figure 3.1: Energy Trilemma Challenge of Balancing Security, Affordability and Sustainability

These five (5) pressures do not operate separately. They overlap. They reinforce one another. In some cases, they also collide. That is why the challenge for ST is not only technical. It is also strategic.

Consumer Complexity

One of the clearest shifts in today's energy landscape is the growing complexity of the consumer base. The sector no longer serves a single uniform group with a single common pattern of demand. It now serves households facing cost pressures, industries seeking competitive prices, prosumers adopting rooftop solar, corporates pursuing renewable supply options, and hyperscale data centres requiring a continuous, high-quality electricity supply. As reflected in Chapter 1, this has made the regulatory task more complex and more immediate.

Each consumer group values energy differently. For some, affordability is the main concern. For others, reliability, transparency and supply flexibility matter more. This means ST must regulate a system with diverse expectations while ensuring fairness across the sector. Reliability indicators are therefore no longer only technical measures. They are also measures of trust, as supply interruptions affect households, industrial activity, digital operations and public confidence.

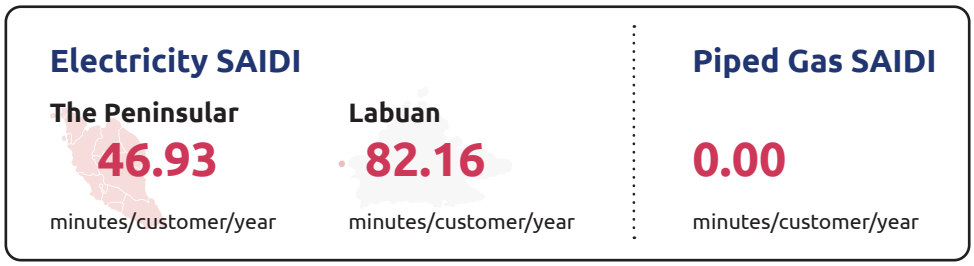


Figure 3.2: Service Quality and Reliability Indicators; SAIDI for Electricity and Piped Gas for 2025

The challenge becomes sharper as consumer participation expands through distributed solar PV, new tariff options, and greener procurement arrangements. At the same time, rising electricity demand from the digital economy, especially hyperscale data centres, adds further pressure on system planning and capacity. For ST, consumer complexity is no longer only about changing demand patterns. It is also about balancing service quality, safety oversight and public trust while ensuring reliable supply for all users.

Government Policy

Government policy is now one of the main forces shaping Malaysia's energy transition. National frameworks such as the NEP 2022–2040 and NETR, together with the national aspiration for net-zero GHG emissions by 2050, have provided clearer direction for the sector, while regional initiatives such as APG and LTMS-PIP show that energy planning is becoming more connected beyond domestic borders. These developments place greater regulatory pressure on ST. The challenge is not only to

respond to policy direction, but to translate it into practical regulation through aligned rules, technical planning and market arrangements. At the same time, the transition must move at a realistic pace, so that cleaner energy goals can be advanced without weakening system reliability or overlooking the continuing role of gas in the near to medium term.

Emerging Technologies

Emerging technologies are central to the current transition. They offer new solutions, but they also create new operational and regulatory complexity. In Malaysia, this can already be seen in the growth of solar PV, battery storage, smart technologies, distributed energy resources, digital system monitoring, and new electricity supply models such as the Corporate Renewable Energy Supply Scheme (CRESS). As noted in Chapter 1, renewable growth is no longer marginal. It is now part of the core operating landscape.

The challenge is that technology adoption does not happen in isolation. Solar PV supports sustainability, but its output is variable and depends on sunlight and weather. As penetration grows, the system also needs balancing support, stronger dispatch capability, storage, grid flexibility and better forecasting. This means the issue is not only about adding renewable capacity, but about whether the system can absorb it safely and reliably.

For ST, emerging technologies are therefore not only about innovation, but also about system readiness. Regulation must cover the wider transition architecture, including grid modernisation, smart grid capabilities, flexibility mechanisms, storage integration, technical standards, market support, and consumer interfaces. The same applies to gas. As electricity systems become more variable, gas may play a greater role in flexibility and balancing support. This gives gas infrastructure renewed transition relevance, but also raises planning risks, as over-investment may increase long-term cost burden, while under-investment may weaken reliability and safety.

Safety and enforcement also become more critical as the technological environment becomes more complex. More technologies mean more installation points, more compliance obligations, and a greater need for competency and inspection.

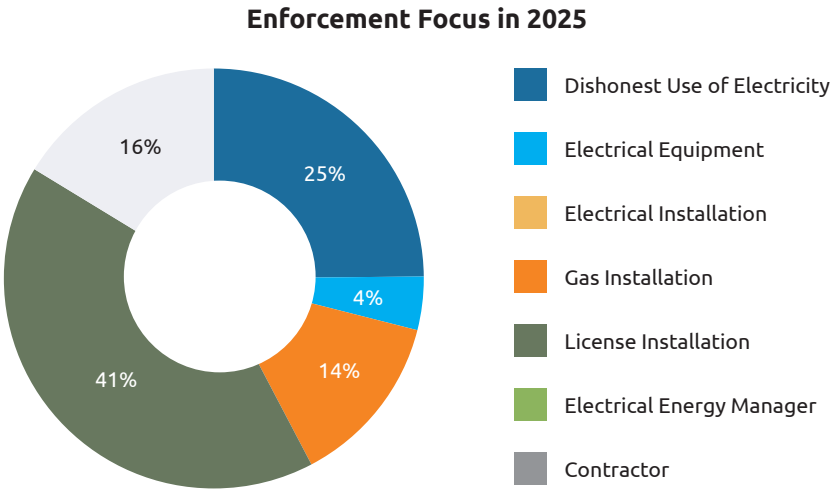


Figure 3.3: Enforcement activities in 2025

In this sense, emerging technologies are promising, but they are not neutral. They increase possibilities. They also increase complexity. ST must therefore regulate innovation with openness, but never without control.

Geopolitics

Energy systems do not operate in a sealed domestic space. They are shaped by global fuel movements, regional market conditions, supply chain stress, geopolitical uncertainty and changing trade patterns. This is why geopolitics remains a major challenge under the Energy Trilemma.

Its effect often appears first through affordability. Fuel price volatility, external market shocks, and regional supply disruptions can raise costs quickly. But the effect does not stop there. Affordability pressure can spill into security pressure. A system may appear adequate on paper, yet still be exposed when the wider energy environment becomes unstable.

This matters for Malaysia because the energy transition is happening while demand is still rising. In Peninsular Malaysia, peak demand reached 21,049 MW and the reserve margin stood at 25%. That suggests the system remained adequately supplied, but it also shows that the margin must be understood together with future load growth, operational complexity and the wider external environment. Security is not only about having enough capacity today. It is also about resilience under stress.

Total Energy
143,973 GWh

Maximum Demand
21,049 MW

Installed Capacity
25,637 MW

Reserve Margin
25%

* The data covers Peninsular Malaysia grid system only

Figure 3.4: Energy Peak Demand and Reserve Margin as of 2025

Geopolitics also affects the meaning of regional integration. As ASEAN interconnection expands, opportunities increase. So do dependencies. Cross-border electricity trade can improve flexibility and support resource optimisation, but it also requires coordination, trust and technical readiness. This means ST must increasingly think beyond domestic adequacy alone. It must also consider interconnection readiness, regulatory coordination and the resilience of regional operating arrangements.

For piped gas, external pressure is equally relevant. Gas markets are shaped by broader global conditions, and those conditions can influence domestic supply continuity, cost structures and long-term infrastructure choices. In this environment, ST must regulate with awareness that the energy sector is now affected not only by local operations, but also by forces beyond the border.

Economic Regulations

Economic regulation has become one of the most delicate challenges in the energy transition because the sector needs continuous investment, but that investment also comes at a cost. This creates a difficult balance between affordability, market efficiency, and long-term sustainability.

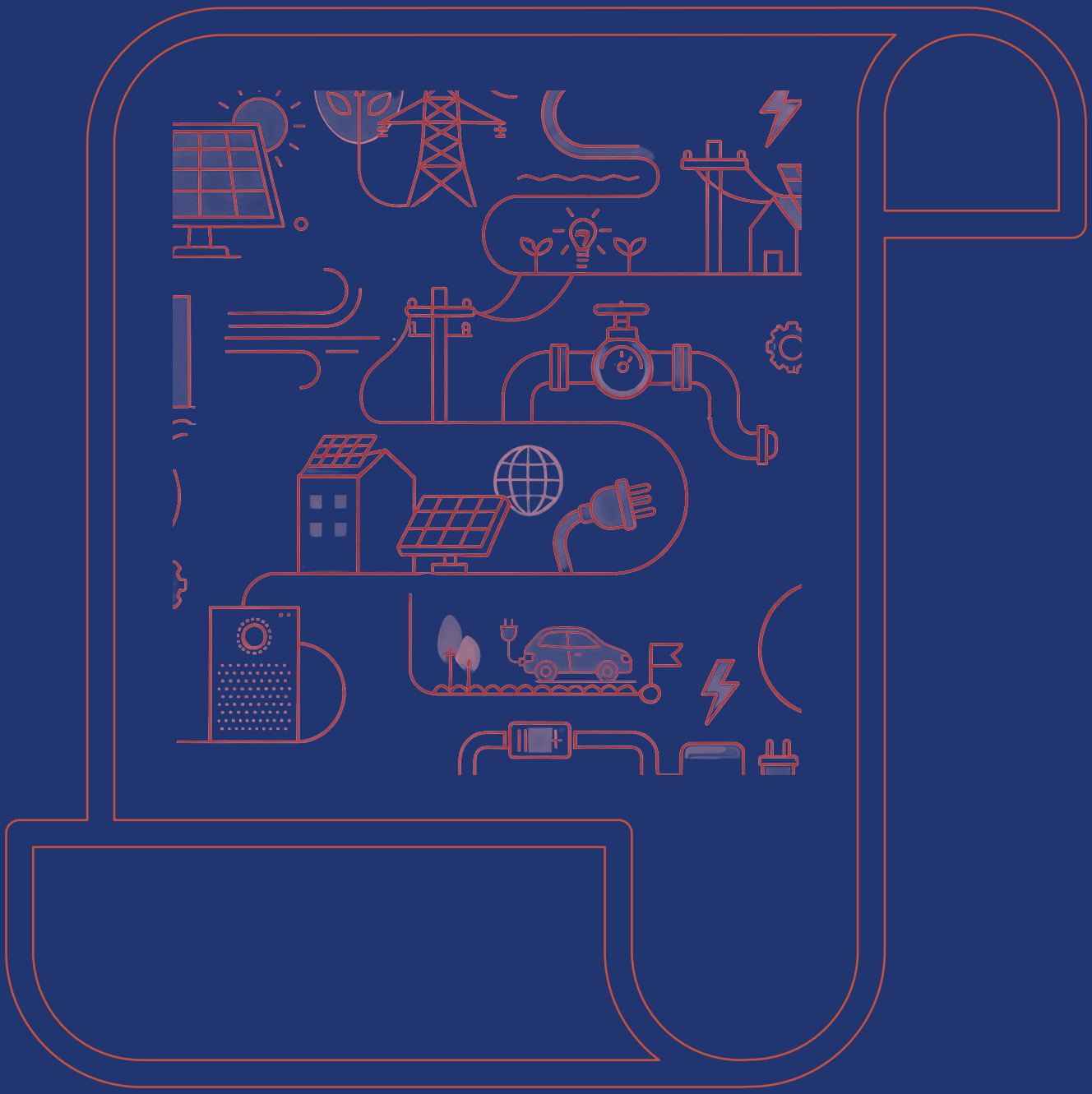
Pricing regulation is becoming more critical as the energy transition raises both investment needs and consumer sensitivity to cost. In electricity, regulation is no longer focused only on cost recovery. It also involves tariff transparency, affordability and fair cost allocation. This is reflected in the ongoing tariff reforms, the use of Imbalance Cost Pass-Through (ICPT), and the move towards more structured and transparent pricing arrangements under Regulatory Period 4 (RP4). In piped gas, pricing regulation remains equally important through the Incentive-Based Regulation (IBR) framework and the continued development of tariff setting for regasification, transportation, and distribution facilities. At the same time, energy market regulation is also evolving. In electricity, this can be seen in tariff restructuring and the gradual widening of market-based arrangements. In piped gas, it is reflected in the expansion of Third-Party Access (TPA) and other market-oriented mechanisms. These developments show that economic regulation is no longer limited to tariff setting alone. It now also includes fair market access, transparent regulatory design, efficient participation, and public confidence in a more complex energy system.

In the electricity sector, this is reflected in RP4 reforms such as tariff unbundling, the expansion of Time-of-Use (TOU) tariffs, including for domestic users, and new renewable procurement frameworks under a willing-buyer willing-seller approach, which signal a gradual move beyond the traditional Single Buyer model. While these reforms can improve efficiency and attract investment, they also raise more complex regulatory questions on grid charges, balancing and ancillary services, tariff transparency, and fair cost allocation.

In the piped gas sector, market evolution is also progressing through the implementation of TPA, which reflects a gradual move towards a more open and competitive market structure. However, greater market openness also requires stronger regulatory discipline. Competition must not come at the expense of safety, supply reliability, or fair access to essential facilities. Economic regulation in this context is therefore not limited to pricing. It also involves fairness, transparency, and public confidence in how the market functions. For ST, the challenge is to manage this reform in a way that supports investment and competition while avoiding unnecessary burden on consumers and preserving system integrity.

CHAPTER 4

The Plan



The Strategic House

The Plan 2026–2030 is anchored on a structured implementation framework that ensures:

- Regulatory priorities are clearly defined;
- Institutional strengthening is aligned to sectoral outcomes;
- Accountability is embedded at the leadership level; and
- Strategy is translated into measurable results.

This framework integrates ST's mandate, regulatory initiatives and organisational transformation into a coherent structure that supports disciplined execution.

The Plan sets out a clear and forward-looking direction for the organisation as it enters its 25th year of establishment. It sets the direction, priorities and institutional commitments of ST for the five-year period from 2026 to 2030 and is anchored in the Statement of Purpose:

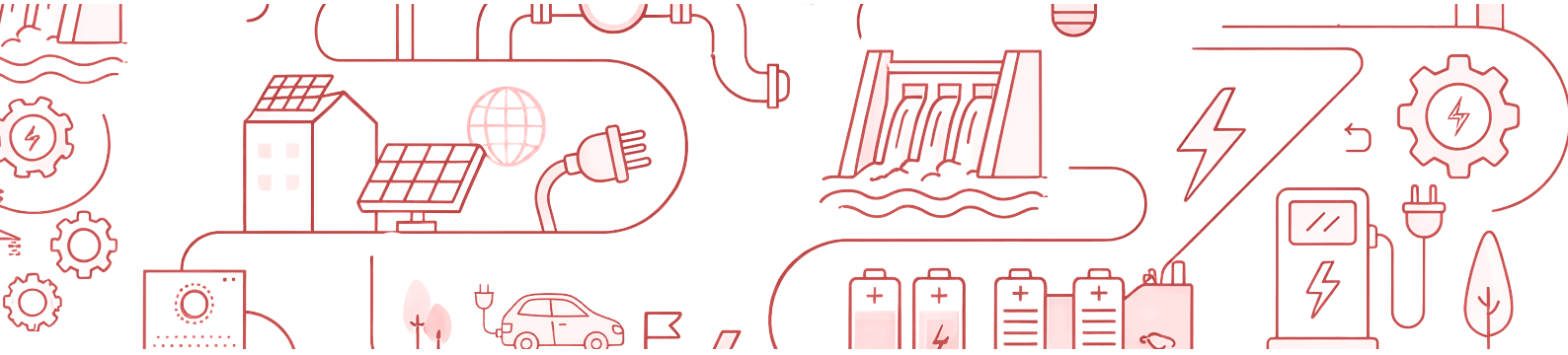
"Committed to serve the interests and well-being of energy consumers in ensuring secure, equitable and clean supply of energy."

This reflects ST's fundamental role as the energy regulator and signals a shift in emphasis: from a regulator that primarily administers compliance and licensing to a strategic institution that shapes Malaysia's energy future in the face of rapid transition, technological disruption, and evolving stakeholder expectations.

It also incorporates ST roles in a changing energy landscape characterised by energy transition imperatives toward cleaner energy systems, decentralisation and digitalisation, consumer empowerment and demand for affordable, reliable, and sustainable energy services and geopolitical and economic pressures that require resilient regulatory responses.

The framework builds on four (4) main components, namely the Statement of Purpose, Strategic Objectives, Strategic & Operational Initiatives, and Institutional Initiatives, which examine a progressive approach to strengthen our roles and execution in the energy industry while protecting the interests of consumers. The overview of the plan is shown in Figure 4.1.

The Strategic Plan is not an operational document. Rather, it provides high-level direction and outcome-oriented targets to guide regulatory decisions, divisional workplans and performance monitoring.



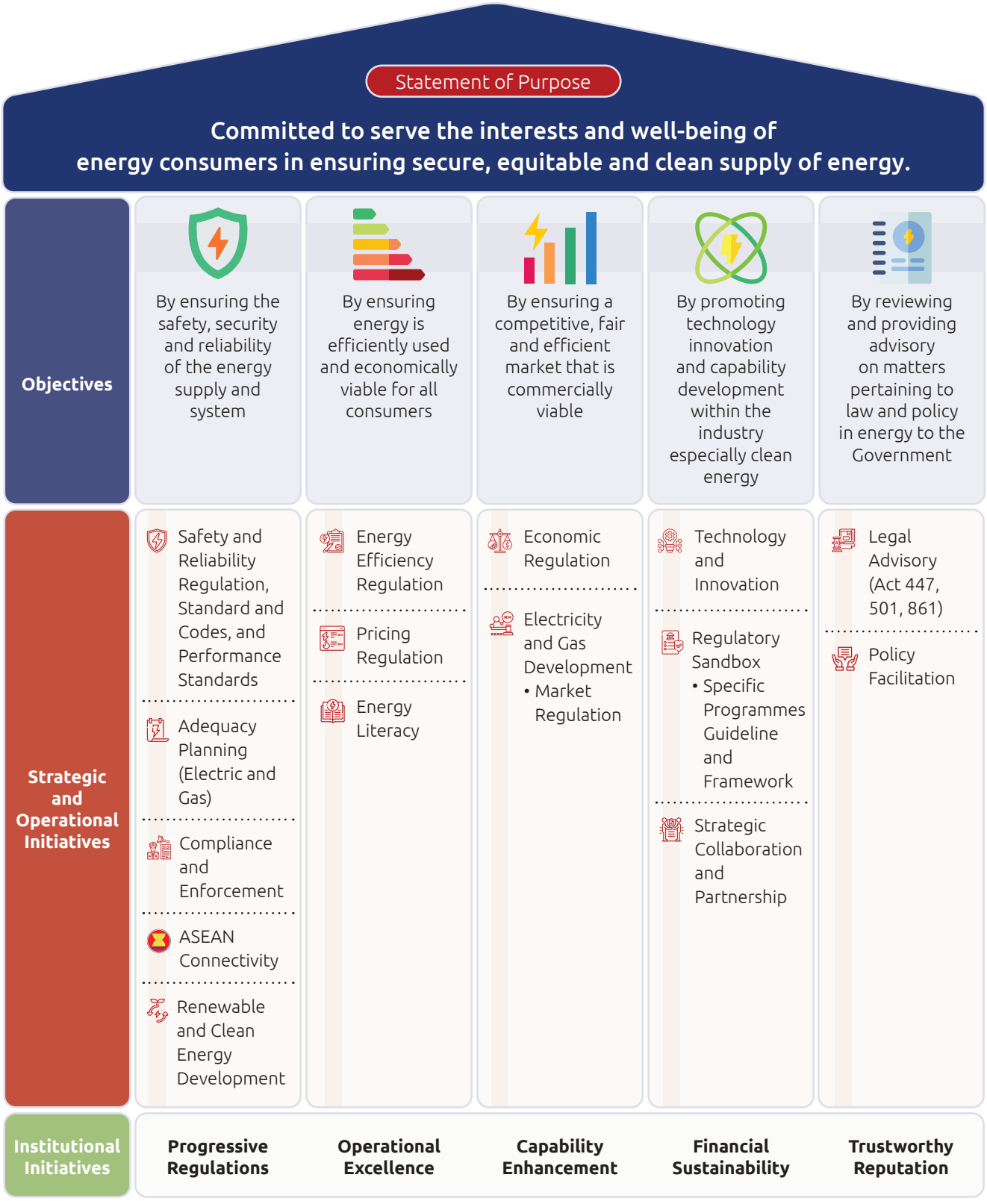


Figure 4.1: ST Strategic House 2026-2030

The Architecture

Four (4) stages were developed to define the Plan:

STAGE 1 Strategic Purpose – "Why We Exist"

To serve the interests and well-being of energy consumers by ensuring secure, equitable and clean supply of energy. This purpose defines the public interest role of ST and guides all regulatory decisions.

STAGE 2 Objectives – "What We Aim to Achieve"

The plan comprises five (5) objectives and 15 Strategic & Operational Initiatives (SOIs). These objectives will guide the initiatives that are prioritised for execution. These initiatives define the substantive regulatory outputs that ST delivers to the electricity and gas industries.

STAGE 3 Strategic and Operational Initiatives (SOI) – "What We Deliver"

The SOIs are grouped into five (5) Strategic Objectives and cover the initiatives listed in the figure. Each SOI has:

- A clearly designated Lead Division;
- Defined supporting roles;
- Outcome-oriented performance indicators;
- Monitoring and reporting mechanisms.

This structure ensures clarity of ownership and eliminates duplication.

STAGE 4 Institutional Initiatives – "How We Deliver"

The fourth stage defines the institutional capability required to deliver the SOIs effectively. Five (5) Institutional Initiatives underpin the Plan are:

- Progressive Regulation
- Operational Excellence
- Capability Enhancement
- Financial Sustainability
- Trustworthy Reputation

These initiatives ensure that ST remains institutionally strong, responsive and credible throughout the 2026–2030 period.

Statement of Purpose

The Statement of Purpose anchors all regulatory priorities and institutional initiatives under the Strategic Plan 2026–2030. The purpose is defined by three (3) core guarantees:

 **Secure and Reliable Supply**	 **Equitable and Fair Market Outcomes**	 **Responsible and Sustainable Energy Transition**
Ensuring that electricity and gas systems operate safely, reliably and with adequate capacity to meet demand under normal and stressed conditions.	Ensuring that tariffs are transparent and cost-reflective, that market access is non-discriminatory, and that consumer rights are protected.	Facilitating renewable integration, promoting energy efficiency and enabling technological innovation without compromising system stability.

These guarantees collectively define ST's mandate as a consumer-focused, system-stabilising and market-balancing regulator.

Strategic Objectives

These are further translated into the abovementioned **five (5) Strategic Objectives and supported by 15 Strategic & Operational Initiatives (SOIs).**

The five (5) core objectives are:

Objective 1
Ensure safety, security and reliability of energy supply and system. This objective draws five (5) SOIs.

Objective 2
Ensure energy is efficiently used and economically viable for all consumers. This objective draws three (3) SOIs.

Objective 3
Ensure a competitive, fair and efficient market. This objective draws two (2) SOIs.

Objective 4
Promote technology innovation and capability development with three (3) SOIs.

Objective 5
Provide advisory on law and policy with two (2) SOIs.

Each objective defines sector-level outcomes to be achieved by 2030 and establishes accountability for delivery. The Strategic Plan embeds clear governance principles, with each SOI assigned to a Lead Division, which has defined roles, regular performance reporting, and transparent decision-making processes.

Transformation as an Enabler

Institutional transformation is integral to achieving strategic outcomes. The Transformation Plan 2026–2030, implemented under six (6) strategic themes are:

- **Strengthen governance and programme management**
- **Realign organisational structure to strategy**
- **Accelerate digitalisation and innovation**
- **Enhance workforce capability and leadership**
- **Improve stakeholder engagement**
- **Ensure financial sustainability**

Transformation initiatives will directly support the institutional initiatives and ensure that regulatory strategy is matched by operational capability.

Institutional Initiative 1: Progressive Regulation

Progressive Regulation ensures that ST's regulatory frameworks remain forward-looking, risk-based and adaptive to sectoral changes. Key focus areas include:

- Continuous review and updating of standards and codes
- Adoption of risk-based regulatory methodologies
- Integration of renewable energy requirements into grid codes
- Strengthening data analytics to support regulatory decisions
- Benchmarking against regional and international best practices

By strengthening regulatory sophistication, ST ensures that safety, reliability, and market integrity are maintained despite increasing system complexity.

Institutional Initiative 2: Operational Excellence

Operational Excellence focuses on improving internal processes, decision-making efficiency, and regulatory responsiveness. This includes:

- Streamlined approval and review procedures
- Clear escalation pathways
- Reduced duplication across divisions
- Standardised reporting mechanisms
- Strengthened coordination between headquarters and regional offices

Operational Excellence ensures that regulatory interventions are timely, consistent, and transparent.

Institutional Initiative 3: Capability Enhancement

A technically competent and professionally disciplined workforce is critical to effective regulation. Capability Enhancement focuses on:

- Strengthening technical expertise in grid systems, gas infrastructure and renewable integration
- Enhancing economic modelling and tariff analysis capability
- Building legal and enforcement proficiency
- Developing digital and data analytics skills
- Cultivating leadership accountability and cross-divisional collaboration

This pillar ensures that ST's officers are equipped to manage increasing sectoral complexity.

Institutional Initiative 4: Financial Sustainability

Institutional resilience requires sound financial management. Financial Sustainability includes:

- Multi-year budgeting discipline
- Cost optimisation initiatives
- Transparent allocation of regulatory resources
- Strengthened internal controls
- Alignment between regulatory priorities and funding allocation

This pillar ensures that ST's transformation initiatives and regulatory programmes are financially viable and measurable.

Institutional Initiative 5: Trustworthy Reputation

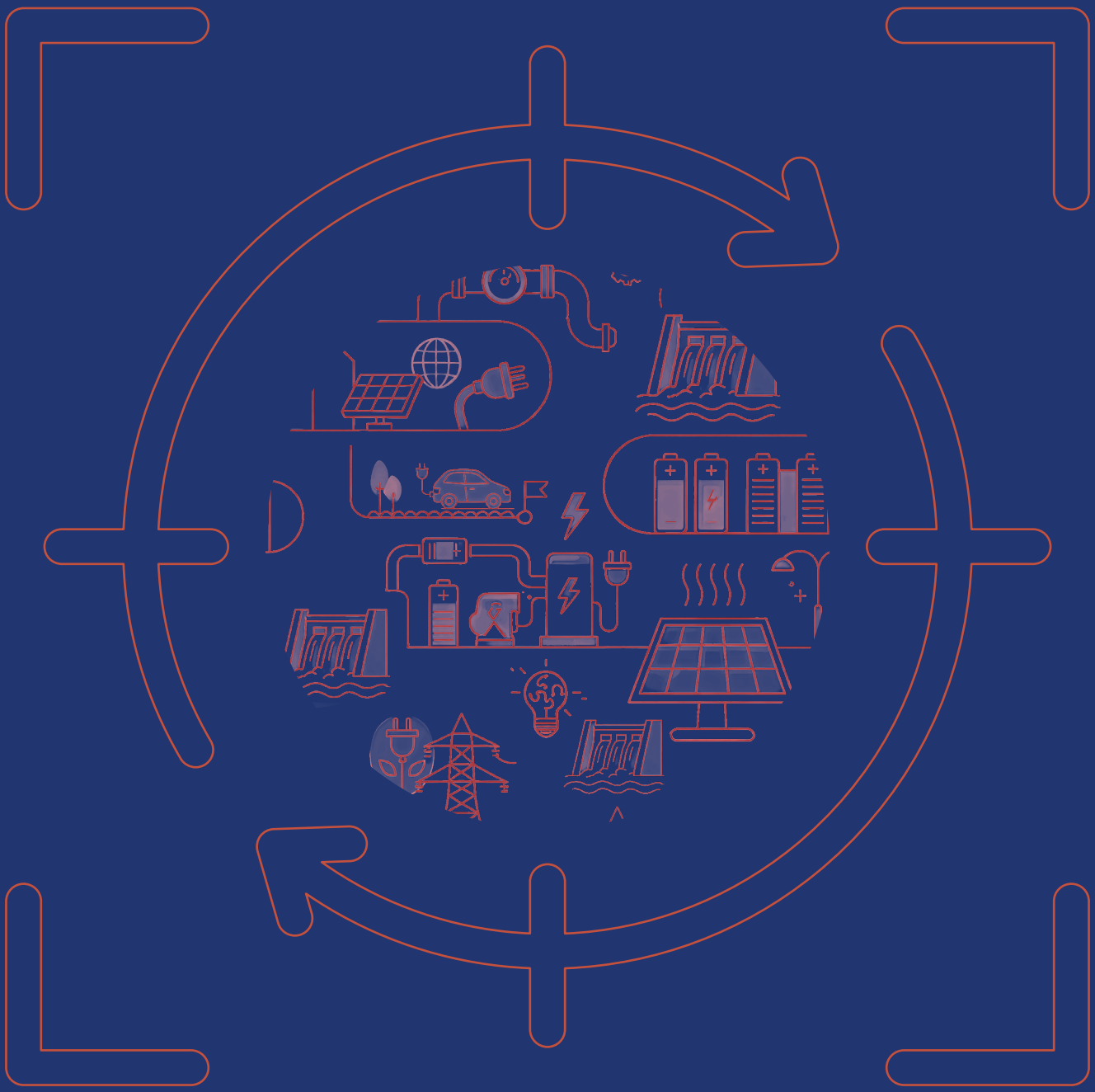
Public trust is fundamental to regulatory effectiveness. Trustworthy Reputation is strengthened through:

- Transparent tariff methodologies
- Clear stakeholder communication
- Timely response to consumer complaints
- Defensible regulatory decisions
- Consistent enforcement actions
- Structured engagement with ministries, industry and regional bodies

A trusted regulator enhances investor confidence and strengthens consumer protection.

CHAPTER 5

Our Focus Action



Delivering the Strategic Objectives

The Strategic Plan 2026–2030 outlines ST's strategic direction in ensuring a secure, equitable and sustainable energy future for Malaysia. Achieving this vision requires a clear set of regulatory priorities that translate strategic intent into practical actions across the electricity and gas sectors.

This chapter sets out the focus actions that will guide the implementation of the Strategic Plan over the next five (5) years. These actions reflect ST's core regulatory mandate to safeguard consumer interests, ensure system reliability, promote efficient market functioning, and support the development of national energy policy.

To deliver these priorities in a structured and coordinated manner, the Strategic Plan is operationalised through a series of **Strategic and Operational Initiatives (SOIs)**. These initiatives represent the key regulatory workstreams through which ST will implement regulatory frameworks, oversee market operations, promote innovation, and strengthen institutional capabilities.

Each initiative is anchored under a designated lead division within ST, supported by relevant divisions across the organisation. This governance structure ensures clear accountability while enabling cross-functional collaboration in delivering regulatory outcomes.

Together, these initiatives provide the operational foundation for achieving the **five (5) strategic objectives of ST**, ensuring that regulatory efforts remain focused, effective, and aligned with Malaysia's evolving energy landscape.

Objective 1: Ensure the Safety, Security and Reliability of Energy Supply and System

Ensuring the safety, security and reliability of the electricity and gas supply system remains a fundamental responsibility of ST as Malaysia's energy regulator. A reliable energy system is essential to support economic growth, industrial activity, and the daily needs of consumers.

As the energy sector continues to evolve with increasing integration of renewable energy, expansion of cross-border interconnections and changing demand patterns, maintaining system reliability requires robust regulatory frameworks, strong technical standards, and effective compliance oversight.

Under this objective, ST will strengthen regulatory standards, enhance system planning and enforce regulatory requirements to ensure that the electricity and gas supply systems continue to operate safely and reliably.

The delivery of this objective will be supported through the implementation of **five (5) SOIs.**

SOI	Strategic & Operational Initiative	Description	Lead Division	Supporting Divisions
SOI 1	Safety and Reliability Regulation, Standards & Codes and Performance Standards	• Develop and enforce regulatory standards and technical requirements to promote safe and reliable operation of electricity and gas infrastructure by regulated entities. • Set and monitor service performance standards to encourage licensed operators to maintain acceptable levels of service quality and reliability.	• Technical Policy & Regulation • Regulatory Services & Performance	• Compliance & Enforcement, • Market Regulation & Planning • Strategy & Corporate Affairs
SOI 2	Adequacy Planning (Electricity & Gas)	• Assess future electricity and gas supply needs and facilitate adequate infrastructure planning to support national demand.	• Market Regulation & Planning	• Economic Regulation & Consumer Policy • Technical Policy & Regulation
SOI 3	Compliance & Enforcement	• Monitor compliance of regulated entities with regulatory requirements and take enforcement action in cases of non-compliance.	• Compliance & Enforcement	• Legal & Secretarial • Technical Policy & Regulation
SOI 4	ASEAN Connectivity	• Facilitate regulatory coordination to support safe and reliable cross-border electricity interconnections within the ASEAN region.	• Market Regulation & Planning	• Strategy & Corporate Affairs • Technical Policy & Regulation
SOI 5	Renewable & Clean Energy Development	• Establish regulatory and technical requirements to enable the integration of renewable energy generation into the national electricity system.	• Market Regulation & Planning	• Technical Policy & Regulation • Economic Regulation & Consumer Policy

Table 5.1: SOIs Supporting Objective 1

Through these initiatives, ST will ensure that Malaysia's energy infrastructure remains resilient and capable of supporting future electricity and gas demand while maintaining system reliability and operational integrity.

Objective 2: Ensure Energy is Efficiently Used and Economically Viable for All Consumers

Efficient energy use and economically sustainable energy systems are essential to support long-term energy security while protecting consumer interests. As energy demand continues to grow across households, industries and emerging sectors such as digital infrastructure, promoting efficient energy consumption becomes increasingly important. At the same time, regulatory mechanisms must ensure that electricity and gas tariffs remain fair, transparent, and economically viable.

Under this objective, ST will strengthen regulatory frameworks that promote energy efficiency, ensure cost-reflective pricing mechanisms, and enhance consumer awareness on responsible energy usage.

This objective will be delivered through the implementation of **three (3) SOIs.**

SOI	Strategic & Operational Initiative	Description	Lead Division	Supporting Divisions
SOI 6	Energy Efficiency Regulation	• Develop and enforce regulatory measures that promote efficient use of energy by consumers and industry	• Technical Policy & Regulation	• Economic Regulation & Consumer Policy • Strategy & Corporate Affairs
SOI 7	Pricing Regulation	• Determine and regulate electricity and gas tariffs to balance consumer affordability with financial sustainability of regulated entities.	• Economic Regulation & Consumer Policy	• Market Regulation & Planning • Legal & Secretarial
SOI 8	Energy Literacy	• Promote awareness and understanding of energy usage, tariffs and efficiency practices among consumers.	• Strategy & Corporate Affairs	• Technical Policy & Regulation, Economic Regulation & Consumer Policy

Table 5.2: SOIs Supporting Objective 2

Together, these initiatives will help ensure that energy consumption becomes more efficient while maintaining affordability and economic sustainability within the energy sector.

Objective 3: Ensure a Competitive, Fair and Efficient Energy Market

A well-functioning energy market is essential to encourage efficient investment, improve operational performance among regulated entities and ensure that consumers benefit from fair pricing and quality services. As Malaysia's energy sector continues to evolve, regulatory frameworks must support transparent market arrangements while ensuring that market participants operate within a fair and accountable regulatory environment.

Under this objective, ST will continue to strengthen economic regulatory frameworks and support the development of competitive electricity and gas market structures.

This objective will be delivered through **two (2) SOIs.**

SOI	Strategic & Operational Initiative	Description	Lead Division	Supporting Divisions
SOI 9	Economic Regulation	• Design regulatory frameworks that encourage efficient investment and operational behaviour among regulated entities while protecting consumer interests.	• Economic Regulation & Consumer Policy	• Market Regulation & Planning • Technical Policy & Regulation
SOI 10	Electricity & Gas Market Development • Market Regulation	• Develop regulatory frameworks that support fair and efficient participation in the electricity and gas market.	• Market Regulation & Planning	• Economic Regulation & Consumer Policy • Legal & Secretarial

Table 5.3: SOIs Supporting Objective 3

Through these initiatives, ST will strengthen the regulatory environment to support efficient market operations while safeguarding consumer interests.

Objective 4: Promote Technology Innovation and Capability Development

Technological innovation is playing an increasingly important role in transforming energy systems worldwide. Emerging technologies such as renewable generation, energy storage, digital monitoring systems and smart grid solutions are reshaping how electricity systems are operated and managed.

To remain responsive to these developments, ST will promote research, innovation and regulatory experimentation that enable new technologies and regulatory approaches to be tested and evaluated before wider implementation.

This objective will be delivered through **three (3) SOIs.**

SOI	Strategic & Operational Initiative	Description	Lead Division	Supporting Divisions
SOI 11 	Technology & Innovation	• Promote technical research on emerging energy technologies to inform regulatory decision-making.	• Market Regulation & Planning	• Technical Policy & Regulation • Strategy & Corporate Affairs
SOI 12 	Regulatory Sandbox • Specific Programmes Guideline and Framework	• Provide a controlled regulatory environment to enable testing of new energy frameworks and models prior to wider deployment.	• Market Regulation & Planning	• Compliance & Enforcement • Legal & Secretarial
SOI 13 	Strategic Collaboration & Partnerships	• Engage with regional and international organisations to support regulatory cooperation and knowledge exchange.	• Strategy & Corporate Affairs	• Market Regulation & Planning • Technical Policy & Regulation

Table 5.4: SOIs Supporting Objective 4

These initiatives will help ensure that ST remains forward-looking and capable of responding to technological developments shaping the future of the energy sector.

Objective 5: Provide Advisory on Energy Law and Policy

As the national energy regulator, ST also plays an important advisory role to the Government in the development and implementation of national energy policies and legislation.

This includes providing regulatory insights, legal advice and technical analysis to support the formulation of policies and legislative frameworks governing the electricity and gas supply industries.

This objective will be delivered through **two (2) SOIs.**

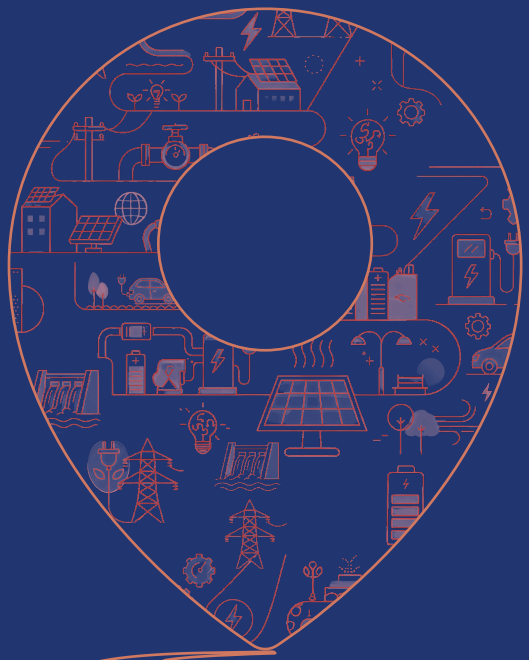
SOI	Strategic & Operational Initiative	Description	Lead Division	Supporting Divisions
SOI 14	Legal Advisory [Act 447, 501, 861]	• Provide legal advice to the Government in relation to regulatory decisions and legislative development under the relevant energy legislation	• Legal & Secretarial Division	• Technical Policy & Regulation • Economic Regulation & Consumer Policy
SOI 15	Policy Facilitation	• Provide regulatory input to support the development and implementation of national energy policies.	• Legal & Secretarial • Strategy & Corporate Affairs	• Technical Policy • Market Regulation & Planning • Economic Regulation

Table 5.5: SOIs Supporting Objective 5

Through these initiatives, ST will continue to support the Government in shaping Malaysia's energy policy and legislative landscape while ensuring that regulatory decisions remain technically sound and aligned with national priorities.

CHAPTER 6

Strategic Implementation Roadmap



Implementation Approach

The successful delivery of the Strategic Plan 2026–2030 requires a structured implementation roadmap that outlines the key milestones to be achieved throughout the strategic period.

This chapter presents the implementation roadmap for each Strategic & Operational Initiative (SOI) that will guide ST's regulatory efforts from 2026 to 2030. The roadmap provides a clear sequence of regulatory actions and institutional developments that will progressively strengthen the regulatory framework governing Malaysia's electricity and piped gas sectors.

The milestones presented in this chapter represent the progressive stages of implementation for each initiative. They indicate the key areas of regulatory development and institutional strengthening that will take place over the five-year period. These milestones therefore serve as a strategic implementation guide rather than detailed performance indicators.

Detailed performance monitoring and numerical indicators will continue to be tracked through ST's internal performance management and reporting mechanisms.

Through the coordinated execution of these initiatives, ST will continue to enhance regulatory effectiveness, strengthen market oversight, promote efficient energy use and support innovation within the energy sector.

Intended Outcomes by 2030

The successful implementation of the Strategic & Operational Initiatives outlined in this roadmap is expected to deliver meaningful improvements in Malaysia's energy regulatory ecosystem by the end of the strategic period.

By 2030, ST aims to achieve a regulatory environment that supports a reliable and resilient energy system, promotes efficient and transparent energy markets, encourages innovation in energy technologies and strengthens regulatory support for national energy policy development.

The intended outcomes reflect the long-term impact of the Strategic Plan and represent the desired state of Malaysia's energy sector following the implementation of the initiatives described in this roadmap.

Objective 1

Ensure the Safety, Security and Reliability of Energy Supply and System

Intended Outcomes by 2030

Malaysia's electricity and gas supply systems operate with high reliability and resilience, supported by robust regulatory standards, adequate infrastructure planning and effective compliance enforcement.

Objective 2

By ensuring energy is efficiently used and economically viable for all consumers

Intended Outcomes by 2030

Energy consumption becomes more efficient across all consumer segments, supported by effective energy efficiency regulations, fair tariff structures and improved consumer awareness.

Objective 3

By ensuring a competitive, fair, and efficient market that is commercially viable

Intended Outcomes by 2030

The electricity and gas markets operate within a transparent, fair and efficient regulatory framework that promotes investment efficiency while protecting consumer interests.

Objective 4

By promoting technology innovation and capability development within the industry especially clean energy

Intended Outcomes by 2030

Emerging energy technologies and innovative regulatory approaches are successfully tested and integrated into Malaysia's energy ecosystem through research initiatives, regulatory sandbox programmes and strategic partnerships.

Objective 5

By reviewing and providing advisory on matters pertaining to law and policy in energy to the Government

Intended Outcomes by 2030

ST continues to serve as a trusted regulatory advisor to the Government, contributing to the development of effective energy policies and legislative frameworks that support national energy transition goals.

Delivering the Strategy

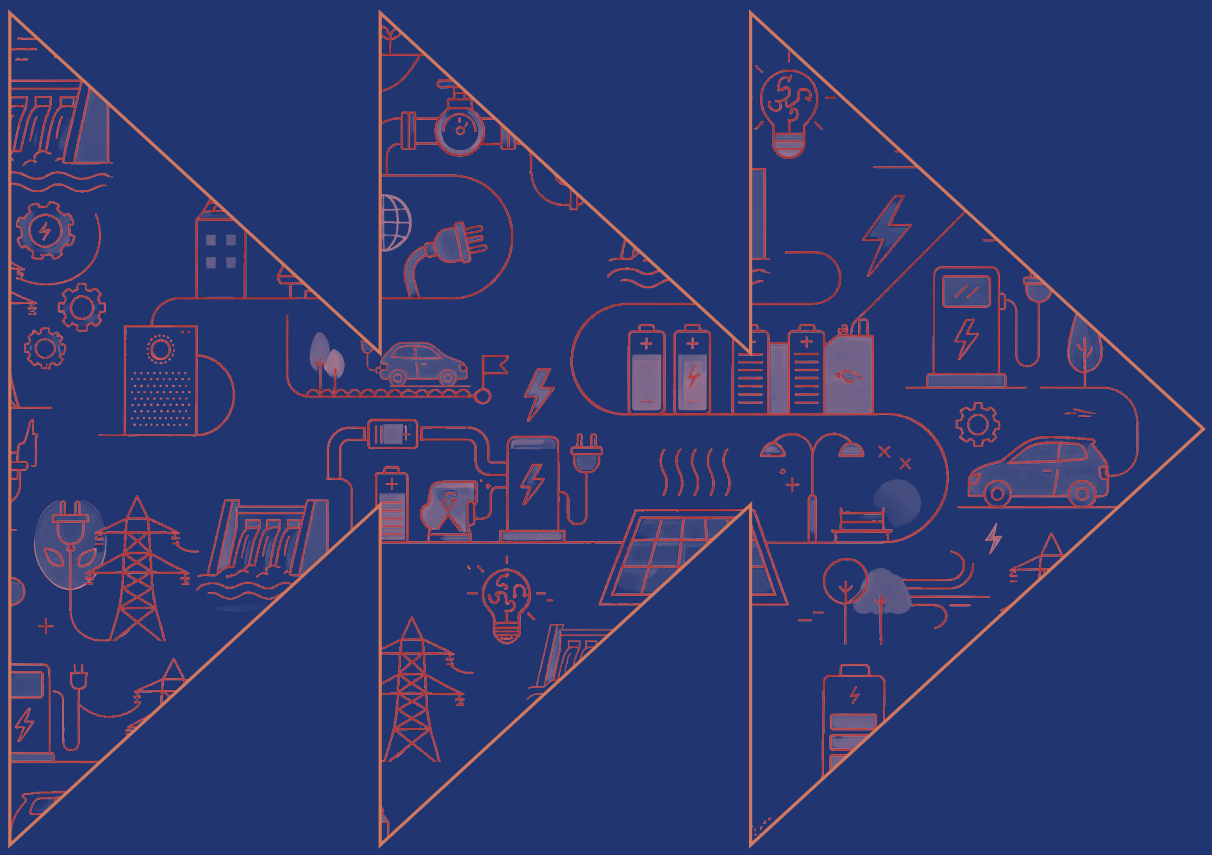
The implementation milestones and intended outcomes outlined in this chapter provide a clear pathway for achieving the strategic priorities of ST over the period 2026–2030.

Through the coordinated implementation of the Strategic and Operational Initiatives, ST will continue to strengthen Malaysia's energy regulatory framework, support the nation's evolving energy transition agenda and ensure that the interests and well-being of energy consumers remain at the centre of regulatory decision-making.

Together, these initiatives position ST to play a critical role in guiding Malaysia's energy sector towards a more resilient, efficient and sustainable future.

CHAPTER 7

Looking Forward



Positioning Suruhanjaya Tenaga for the Future

The years leading to 2030 will represent a transformative period for Malaysia's energy sector. Rapid changes in technology, increasing demand for electricity, the expansion of renewable energy, evolving market arrangements and greater regional interconnection will continue to reshape how energy systems are planned, regulated and operated.

At the same time, consumers are becoming more diverse and more engaged in the energy ecosystem. Households, industries, digital infrastructure operators, prosumers and commercial users increasingly expect reliable supply, transparent pricing and sustainable energy options. These developments mean that the role of energy regulation is becoming broader, more complex and more strategically significant than ever before.

In this evolving landscape, ST must continue to position itself as a forward-looking and credible regulator that is capable of responding to change while preserving system stability. ST increasingly operates at the intersection of three (3) key stakeholder interests: government policy direction, the operational and investment needs of industry participants, and the expectations of consumers and energy users for reliable, affordable and transparent energy services.

These interests do not always move in the same direction. Government policies establish the national pathway for energy transition, economic development and sustainability. Industry players require regulatory clarity and financial viability to support investment in generation, networks and infrastructure. At the same time, consumers and energy users expect fair tariffs, high service reliability and strong regulatory protection.

The role of ST is therefore to maintain a careful and responsible balance between these interests while safeguarding the long-term integrity of the energy system.

This balancing responsibility reflects the broader challenge of the Energy Trilemma, discussed earlier in Chapter 3, which requires the simultaneous management of energy security, affordability and sustainability. As Malaysia continues to advance towards a cleaner and more diversified energy system, regulation must ensure that renewable energy integration, market reforms and technological innovation are implemented in a manner that preserves reliability and protects consumer interests.

The Strategic Plan 2026–2030 provides the framework through which ST will respond to these challenges. Through its Strategic Objectives, Strategic and Operational Initiatives, and institutional transformation efforts, the Plan establishes a clear direction for strengthening regulatory effectiveness and ensuring that the energy sector develops in a secure, orderly and sustainable manner.

Looking ahead, ST will continue to enhance its regulatory capability, deepen its technical expertise and strengthen institutional coordination to ensure that regulatory decisions remain evidence-based, transparent and aligned with national priorities.

Commitment to Effective Implementation

The success of this Strategic Plan will depend not only on the clarity of its framework but also on the discipline and consistency of its implementation.

ST is committed to ensuring that the priorities outlined in this Plan are translated into meaningful regulatory actions across the electricity and piped gas supply industries. This will be supported through clear governance structures, strong cross-divisional coordination and continuous performance monitoring throughout the implementation period.

The Strategic and Operational Initiatives identified in this Plan will serve as the primary regulatory workstreams through which ST will strengthen safety and reliability standards, promote efficient energy use, support transparent market development and facilitate technological innovation within the sector.

Institutional transformation will also play an important role in enabling successful implementation. The Transformation Plan 2026–2030 will continue to strengthen organisational capability through digitalisation initiatives, workforce development, improved governance mechanisms and enhanced stakeholder engagement.

At the same time, ST recognises that the operating environment may continue to evolve over the coming years. Technological developments, policy shifts, market reforms and global economic conditions may introduce new challenges and opportunities for the energy sector.

For this reason, the Strategic Plan should be understood not as a static document, but as a strategic guide that will inform regulatory priorities and institutional development throughout the period 2026–2030. Continuous learning, adaptive regulation and proactive engagement with stakeholders will remain essential in ensuring that the Plan remains relevant and effective.

Strengthening Regulatory Leadership

As Malaysia's energy sector continues to develop, the role of ST will extend beyond regulatory oversight alone. ST will increasingly play a leadership role in guiding the sector through a period of structural transition.

This includes strengthening regulatory governance, facilitating coordination across sector stakeholders and contributing technical expertise to national energy policy development. ST will continue to engage closely with Government ministries, industry participants, regional partners and international organisations to ensure that Malaysia's regulatory framework remains aligned with global best practices while addressing domestic priorities.

Regional cooperation will also remain an important component of this leadership role. Initiatives such as the ASEAN Power Grid and other regional energy integration programmes will require continued regulatory collaboration across ASEAN Member States. ST will therefore continue to support regional dialogue, knowledge exchange and regulatory cooperation in strengthening energy governance across the region.

Through these efforts, ST aims to reinforce its position as a credible, trusted and respected energy regulator both domestically and within the broader regional energy community.

Moving Towards a Sustainable Energy Future

The Strategic Plan 2026–2030 marks an important milestone in the continued development of ST as Malaysia's energy regulator.

Over the coming years, ST will remain focused on safeguarding system reliability, protecting consumer interests, promoting efficient and transparent market structures and supporting the responsible integration of cleaner energy technologies.

By implementing the strategic priorities outlined in this Plan, ST aims to contribute towards the development of an energy system that is secure, resilient, economically sustainable and environmentally responsible.

Ultimately, the success of this Strategic Plan will be reflected not only in regulatory achievements but also in the confidence of consumers, the stability of the energy system and the ability of the sector to support Malaysia's broader economic and sustainability goals.

With clear direction, strengthened institutional capability and disciplined implementation, ST will continue to play a central role in guiding Malaysia's energy sector towards a more resilient, efficient and sustainable future.

In doing so, ST reaffirms its commitment to its core purpose **to serve the interests and well-being of energy consumers by ensuring secure, equitable and clean supply of energy**.

A Sustainable Future for Energy Consumers

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