DrukGreen
(a dhi company)

Corporate **Strategy Plan** 2025-2040

Powering Bhutan's clean energy future

Charting a bold and resilient energy future, this Corporate Strategy Plan 2025–2040 outlines DGPC's pathway to scale, diversify, and deliver sustainable value while powering Bhutan's clean energy ambitions with innovation, partnerships, and operational excellence.

Corporate Strategy Plan
2025-2040

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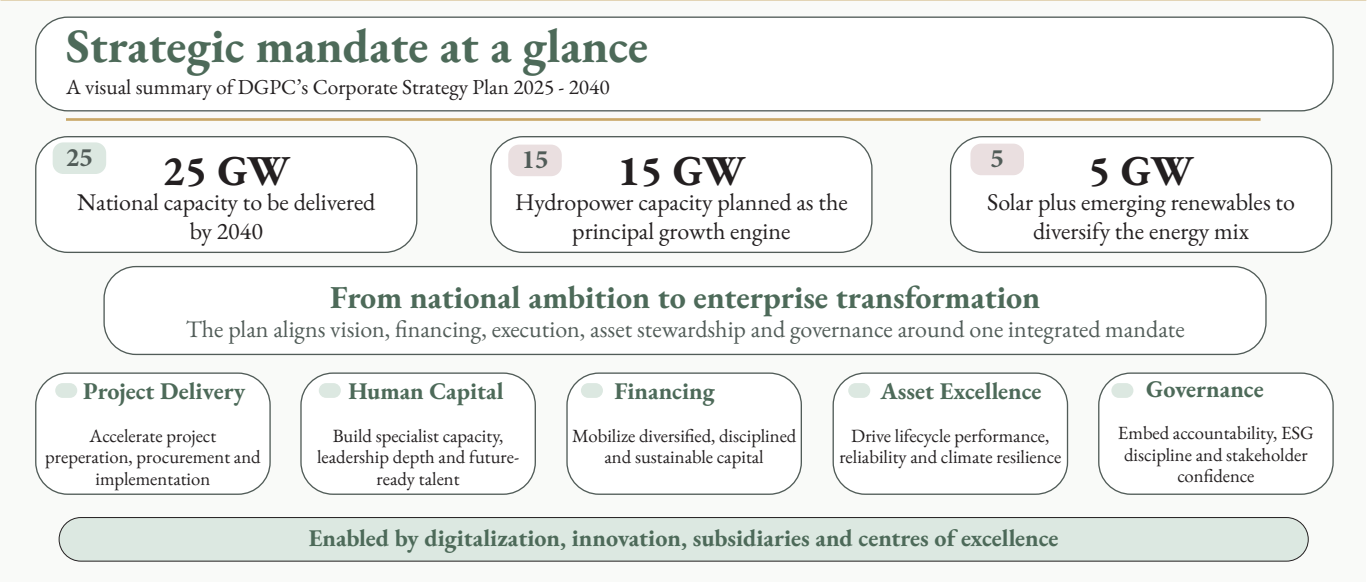
ABBREVIATIONS

AMS	Asset Management System
BBIN	Bangladesh, Bhutan, India and Nepal
BESS	battery energy storage systems
BHSL	Bhutan Hydropower Services Limited
CDI	Conscious Driven Investors
CoE	Centre of Excellence
CSP	Corporate Strategy Plan
DAM	Day-Ahead Market
DFI	Development Finance Institutions
DGC	Druk Green Consultancy
DGPC	Druk Green Power Corporation Limited
DHI	Druk Holding & Investment Limited
DHyE	Druk Hydro Energy Limited
E&M	Electro-mechanical
EPCF	Engineering, Procurement, Construction, and Financing
ERM	Enterprise Risk Management
ESG	Environmental, Social, and Governance
EXIM	Export-Import
GDP	Gross Domestic Product
GMC	Gelephu Mindfulness City
GNH	Gross National Happiness
HR	Human Resource
HRDC	Hydropower Research & Development Center
HSE	Health, Safety and Environment
IMS	Integrated Management System
InvIT	Infrastructure Investment Trusts
IPP	Independent Power Producers
IRD	Investor Relation Desk
MDB	Multilateral Development Banks
MoENR	Ministry of Energy and Natural Resources
MW	Megawatt
O&M	Operation & Maintenance
OEM	Original Equipment Manufacturer
PPA	Power Purchasing Agreement
PPP	Public-Private Partnerships
REDR	Renewable Energy Development Roadmap 2024
RGoB	Royal Government of Bhutan
SAARC	South Asia Association of Regional Cooperation
SHPP	Small Hydro power Project
SPV	Special Purpose Vehicle
TAM	Term-Ahead Market
USD	US Dollar

EXECUTIVE SUMMARY



The Corporate Strategy Plan 2025-2040 of Druk Green Power Corporation Limited sets forth the medium-term roadmap to realize Bhutan's renewable energy vision of achieving 25 GW of installed capacity by 2040. Anchored in His Majesty's Vision of the Gelephu Mindfulness City, the Royal Government of Bhutan's 21st Century Economic Roadmap and DHI's 10X Group Roadmap, the CSP positions DGPC as the principal catalyst driving Bhutan's clean energy transition, economic diversification, energy cooperation with India, and regional energy integration.

The Plan is founded on DGPC's renewed Vision to *"promote, develop, and manage renewable energy resources efficiently and sustainably for a resilient future"*, and its Mission, which emphasizes energy security, inclusive growth, and value creation through innovation, capacity building, and strong environmental and social stewardship. These commitments are operationalized through five interdependent strategic pillars: Project Management, Human Capital, Financing, Asset Management, and Governance. Together, these pillars are complemented by strategic enablers- DGPC's subsidiaries and Centres of Excellence (CoEs)- and strengthened by digitalization and innovation, creating an integrated framework that aligns corporate strategies with national ambitions.

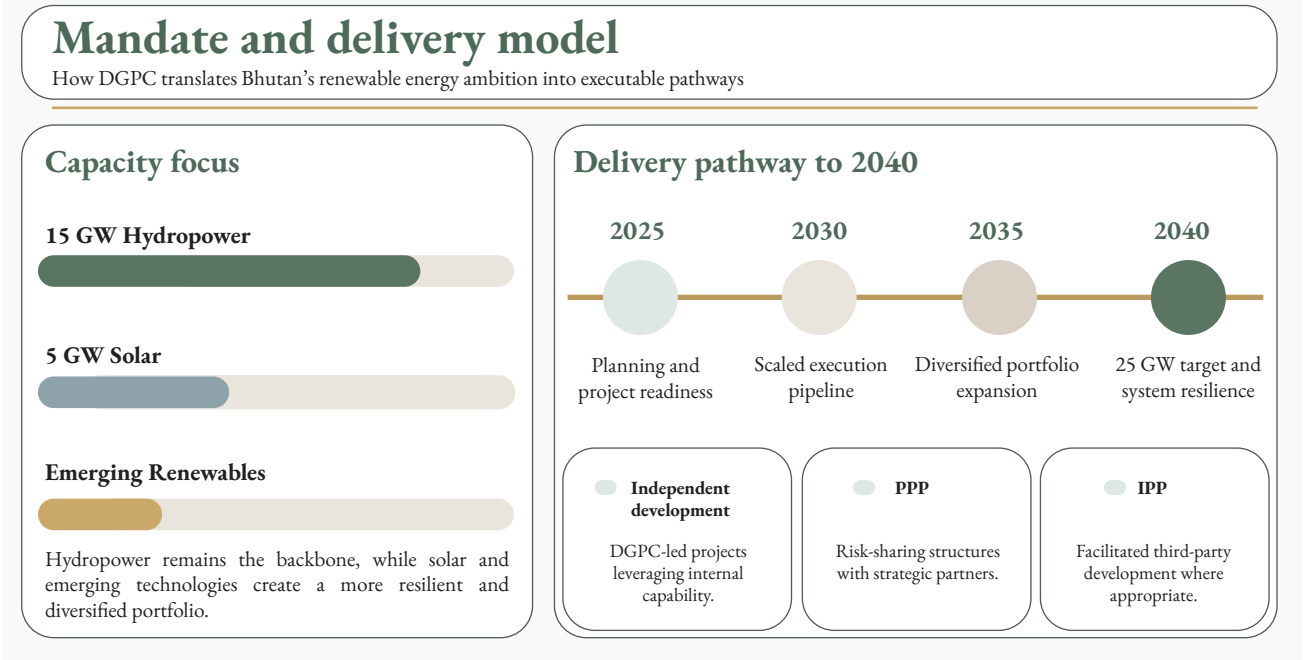
The Project Management Strategy defines an accelerated implementation model that strengthens in-house expertise, leverages strategic partnerships, and integrates advanced technologies to achieve the 25 GW target efficiently and sustainably. The Human Capital Strategy focuses on nurturing a future-ready workforce through organizational optimization, leadership development, and digital transformation. The Financing Strategy introduces innovative and sustainable instruments such as green and corporate bonds, blended and impact finance, infrastructure investment trusts, and asset monetization apart from conventional financing to ensure financial resilience and enhance DGPC's access to global green capital markets.

Simultaneously, the Asset Management Strategy emphasizes lifecycle optimization, predictive maintenance, and watershed and sedimentation management to enhance operational reliability and asset longevity of the hydropower resources. It further positions DGPC to expand into new technologies such as solar, battery storage, geothermal, green hydrogen and small modular reactors, diversifying Bhutan's renewable energy mix. The Governance Strategy reinforces institutional integrity and accountability through ESG integration, stakeholder engagement, and transparent decision-making, ensuring full alignment with national frameworks and international standards.

DGPC's core values, embodied in the acronym PROGRESS- Pride and Ownership, Resilience, Optimism, Growth and Innovation, Responsibility and Accountability, Environmental and Social Stewardship, and Service Excellence- form the key underlying foundation of this transformation. These values inspire every resolve and initiative, embedding a shared purpose and performance-driven mindset across the organization.

The Corporate Strategy Plan goes beyond the core business of energy generation and revenue earning. It represents a blueprint for institutional transformation, one that positions DGPC as a future-ready, innovation-driven, and socially responsible energy utility. Through disciplined execution, digital advancement, and a culture of excellence, DGPC will reinforce Bhutan's brand as a global leader in the sustainable, inclusive, and forward-looking development and utilization of renewable energy while affirming its commitment to preserve and ensure the sustainable use of the country's vast renewable energy resources.

BACKGROUND AND MANDATE



His Majesty's vision for the Gelephu Mindfulness City, Bhutan's 21st Century Economic Roadmap and DHI's 10X Roadmap articulate the genesis of a national aspiration to achieve tenfold GDP growth by 2050. This is driving the transformative innovation and initiatives that Bhutan has embarked on, all of which need an assurance for energy security and affordability. Energy is positioned at the core of this new age dawning on us, serving as a driver of the AI transformation and as a prerequisite for stimulating investments across all sectors of the economy.

In alignment with this national vision, the Ministry of Energy and Natural Resources has projected that Bhutan will require a minimum of 25 GW of installed electricity generation capacity by 2040 to meet the forecasted domestic demand through renewable energy sources. Bhutan's current installed capacity of approximately 3,490 MW, representing just 11% of its techno-economically viable potential, highlights the magnitude and urgency of scaling renewable energy deployment within the next one and a half decades.In addition to the existing generation assets and projects under construction, Bhutan would require the development of an additional 20 GW of new capacity by 2040. Under the existing institutional arrangements and mandates, the responsibility of implementing the renewable energy projects and management of O&M thereafter falls on DGPC. DGPC's 10X journey is therefore intrinsically linked to the national growth aspirations, with its future performance and strategic direction shaped principally by the company's ability to deliver large-scale generation expansion. Aligned with Bhutan's objective of ensuring long-term energy security to underpin accelerated economic growth, DGPC's 2040 mandate focuses on the development of:

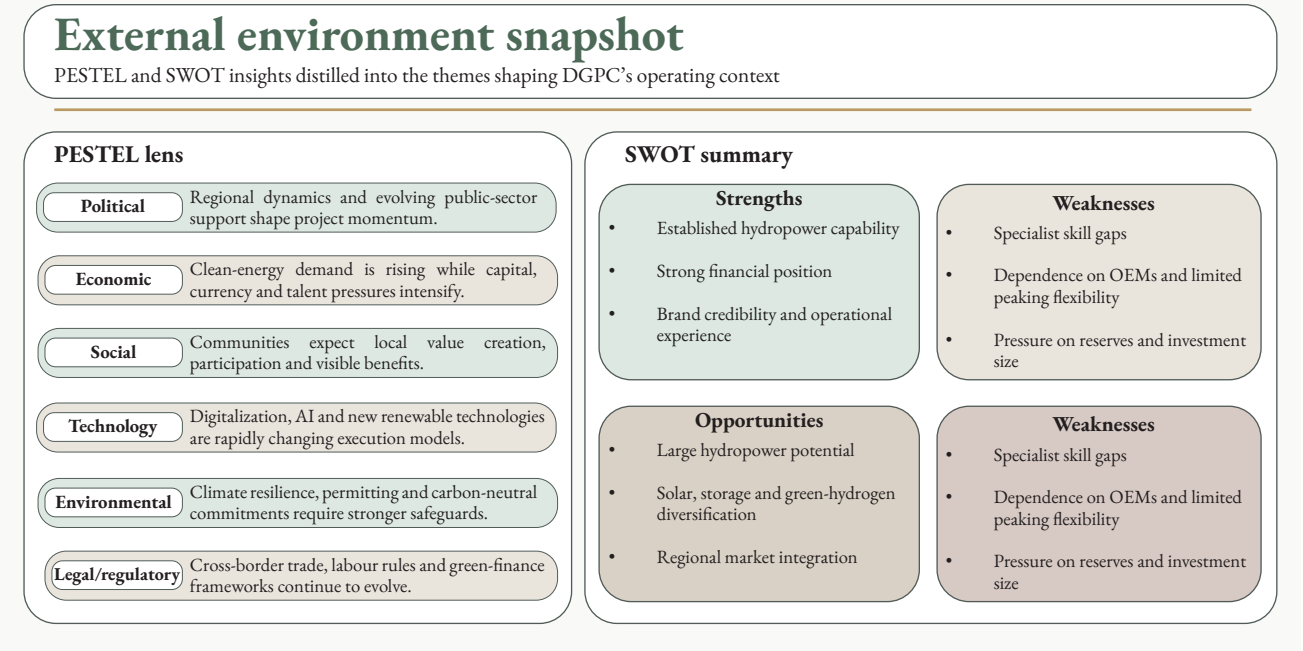
- 15 GW of new hydropower capacity
- 5 GW of solar capacity
- Other renewable energy resources such as geothermal and green hydrogen with evolving technologies and cost-effectiveness

To operationalize this expansion, DGPC will pursue renewable energy development through three complementary delivery and investment models:

- **Independent Development:** DGPC-led projects leveraging internal capabilities
- **Public-Private Partnerships (PPP):** Risk-sharing arrangements with strategic partners
- **Independent Power Producers (IPP):** Facilitation and enabling of third-party developers

While hydropower and solar energy remain the backbone of Bhutan's projected generation mix, DGPC will also advance exploration and integration of emerging energy technologies, including geothermal, battery energy storage systems (BESS), green hydrogen, and small modular reactors.

EXTERNAL ENVIRONMENT



The general environment in which DGPC operates was analyzed using PESTEL framework and SWOT analysis and details of the analysis are presented below:

i. PESTEL Analysis

Dimension	Critical Factors Impacting DGPC
Political	· Regional geopolitical dynamics affecting energy trade · Shift from bilateral funding, grants and initiatives · Evolving international funding mechanisms and climate finance · Strong government commitment to renewable energy
Economic	· Rising global demand for clean energy · Increasing subsidies and investments in Solar and Wind · Rising domestic energy demand · Competitive talent market driving retention challenges · Foreign exchange exposure in project financing · Rising cost of hydropower development · Limited domestic capital markets
Social	· Growing community expectations for local employment and benefits · Public participation in renewable energy projects
Technology	· Rapid advances in plant automation and digitalization · AI and data analytics transforming operations and maintenance · Emerging renewable technologies (solar, BESS, hydrogen) · Cybersecurity imperatives in critical infrastructure
Environmental	· Growing attention of environmental protection · Climate change and global warming · Complex environmental clearance processes for developing new projects · Bhutan's commitment to carbon neutrality and forest conservation · Growing global emphasis on ESG compliance
Legal/Regulatory	· Evolving employment and labor regulations · Strengthening health and safety standards · Industry regulations · Development of green finance regulatory frameworks · Cross-border energy trading agreements

ii. SWOT Analysis

Strengths	Weaknesses
• Skilled and experienced workforce (over three decades of hydropower and O&M experience) • Established CoEs (HRDC and DGC) • Strong financial position • ISO Certified Company in IMS and AMS • Strong brand reputation • 100% Bhutanese workforce • Vibrant young employee base and dynamic management team • Ancillary manufacturing facilities (BHSL, Bhutan Automation) to provide manufacturing and specialized services for hydropower components, and SPV (DHyE) for construction of SHPPs • Synergy between DGPC and subsidiaries for knowledge transfer and operational excellence	• Lack of adequate in-depth subject expertise • Mismatch of skill sets to jobs • Age gap between senior and mid-level management • Social and environment concerns in hydropower including employee health and safety • Run-of-river hydropower plants with limited peaking capabilities putting at risk energy security • Need to strengthen subsidiary companies such as BHSL to cater to expanding needs • Dependency on OEMs and changing priorities of these OEMs for specialized services and spares • Lower profit retention into reserves limiting investment decisions and size
Opportunities	**Threats**
• Renewable hydropower potential of 36,000 MW plus pumped storage potential • Energy diversification into solar, green hydrogen, battery storage, and SMR • Energy market in India and BBIN/SAARC region • Outsourcing of ancillary services • Business diversification and strategic partnership including energy trade • Reservoir schemes for multipurpose use • Improve governance, employee morale and productivity • Digital transformation • Emerging private sector engagement in investments and project execution	• Impact of climate change • High seismic risk • Risks of a single power market • Legislative and policy changes related to taxes, employment, and environment • Cybersecurity risks from increased digital exposure and interconnected systems. • Limited pool of talent supply • Increasing employee attrition • Rising cost of hydropower construction and competitive of energy pricing

MAJOR CHALLENGES & RISKS

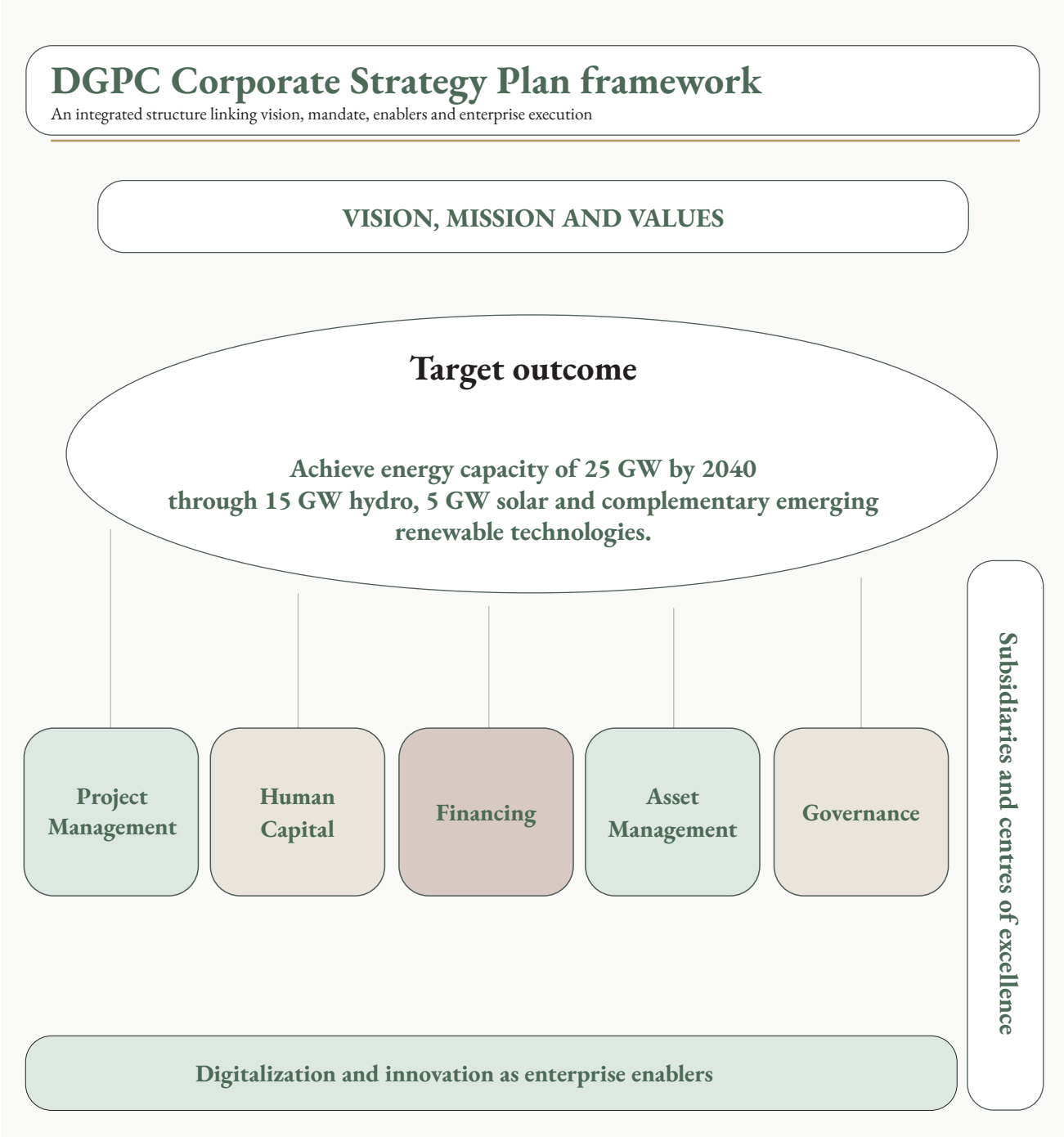
From the combined PESTEL and SWOT assessments, DGPC faces the following major challenges and risks critical to achieving its 2040 mandate and sustaining thereafter:

Challenges	Risks
i. Project Implementation Delivering 20 GW new capacity within 15 years requires delivering 3 projects every year while navigating complex technical, social, and environmental conditions.	**i. Financial and Debt Sustainability** Exposure to debt overhang, exchange rate fluctuations, and interest rate volatility affecting capital costs and financial viability.
ii. Human Capital Recruiting, developing and retaining a skilled and future-ready workforce of the projected core 4600 employees by 2040 that are capable of managing renewable projects from construction to operation and maintenance in a competitive talent market.	**ii. Policy, geopolitical & regulatory** Cross-border energy market dependence- with India as the principal off-taker- exposes the sector to policy shifts and bilateral/regional uncertainties.
iii. Finance Mobilizing unprecedented financing of US$ 26 billion through diversified, sustainable financing mechanisms while managing debt sustainability and capital efficiency.	**iii. Environmental and Climate** As a major hydropower-based economy, significant exposure to climate-induced challenges, including glacial melt, floods, and changing hydrological patterns.
iv. Energy Market Reducing single-market dependency while ensuring long-term revenue stability through regional market integration and diversified energy products.	**iv. Social, Community and Reputation** The license to operate rests on public trust and social legitimacy. Any misalignment between development goals and community expectations could affect acceptance of projects.
v. Institutional Ecosystem Ensuring coordinated support from government agencies, regulators, and development partners through enabling of policies and streamlining of approval processes.	**v. Technology and infrastructure** Aging hydropower infrastructure, technology and system inefficiencies can diminish generation reliability.
vi. Private Sector Engagement Partnering with Bhutanese private sector for long-term capacity development to deliver on project executions and provide opportunities for investments in renewable energy.	

These challenges, risks, strengths, and opportunities guide the strategic response encapsulated in DGPC's Corporate Strategy Plan framework, including its Vision, Mission, and Values. Achieving the mandate requires unprecedented coordination across policy formulation, financing, project development, environmental management, technology integration, human resource development, and long-term asset stewardship. It also necessitates a transformation in DGPC's operational model to accelerate delivery while upholding technical excellence, system reliability, and sustainability commitments, and commitment to global Environmental, Social and Governance (ESG) standards.

DGPC CORPORATE STRATEGY PLAN FRAMEWORK

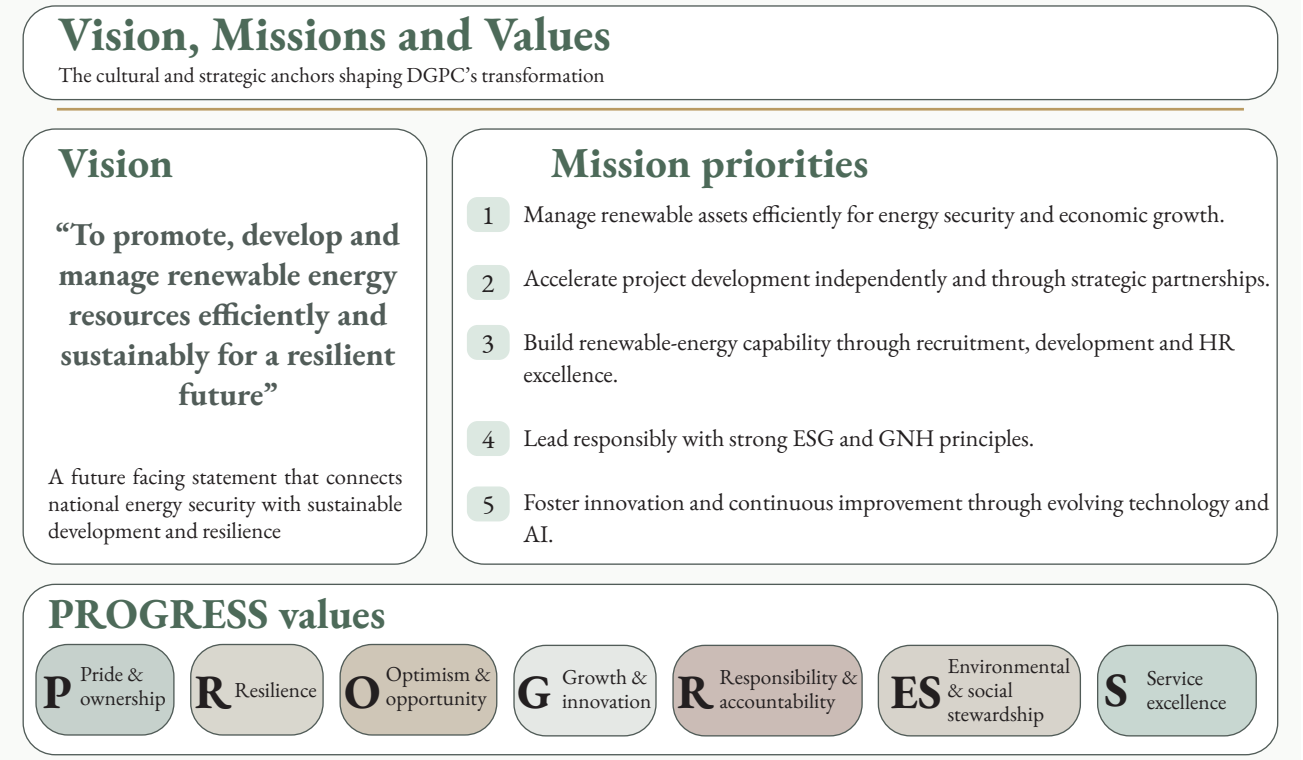
The DGPC CSP Framework serves as the bridge connecting Bhutan's national 25 GW by 2040 mandate with DGPC's organizational execution strategy for the next 15 years. It is designed around five interdependent strategic thematic enablers that translate aspiration and ambition into action, ensuring coherence, accountability, and results. These pillars are reinforced by advanced digital technologies, innovation platforms, and coordinated support to/from DGPC's portfolio companies.



DGPC's Corporate Strategy Plan Framework

The Corporate Strategy Plan thus represents an integrated framework for transformation, anchored in national priorities, powered by innovation, guided by disciplined execution, and aided by strategic partnerships with the private sector. Through this approach, DGPC will not only meet its generation targets but also evolve into a future-ready energy institution capable of driving Bhutan's clean energy leadership across the region.

COMPANY'S VISION, MISSION & VALUES



DGPC has redefined its vision, mission, and core values to align with Bhutan's evolving national priorities and development vision. Guided by the Royal Government's *21st Century Economic Roadmap* and DHI's *10X Group Roadmap*, DGPC's renewed vision, mission, and values reflect its steadfast commitment to driving Bhutan's sustainable transformation and building a resilient, inclusive, and future-ready energy sector.

This strategic repositioning reinforces DGPC's role as a catalyst for clean energy development, fostering innovation, and integrating environmental stewardship with mindful economic growth. Every initiative undertaken by DGPC is purposefully aligned to contribute to Bhutan's long-term aspirations for prosperity, sustainability, and carbon neutrality.

VISION:

To promote, develop and manage renewable energy resources efficiently and sustainably for a resilient future

MISSION:

a. Effectively and efficiently manage renewable energy assets for energy security to drive economic growth, enable other investments, and maximise value to the shareholder

b. Take a lead role in accelerating the development of renewable energy resources independently or through strategic partnerships or any other arrangements to serve domestic and regional energy markets

c. Build capacity and sustain expertise in renewable energy through strategic recruitment, development, and HR excellence

d. Be a responsible, proactive, and progressive company guided by strong ESG and GNH principles

e. To foster a culture of innovation and continuous improvement through the adoption of evolving technology and Artificial Intelligence

VALUES

Development of CSP is guided by the innate Core Values of each and every employee to be highly committed, resilient and progressive in taking forward the company's vision and mission with the tremendous prospects for growth - abbreviated in the word **"PROGRESS"**. DGPC believes that each employee plays a vital role in realizing the ambitious goal of achieving 25 GW by 2040. By embodying the PROGRESS values: taking *pride* and ownership, demonstrating *resilience*, embracing *optimism* and opportunity, driving *growth* and innovation, upholding *responsibility* and accountability, practicing *environmental* and social stewardship, and delivering *service* excellence: each individual contributes uniquely and meaningfully to the organization's success.

This collective commitment ensures that challenges are met with determination, projects are executed with precision, and sustainable growth is achieved in harmony with Bhutan's natural and social environment. Together, the dedicated workforce forms the foundation for DGPC's transformative journey toward a clean, reliable, and prosperous energy future for the nation. These Core Values as abbreviated as **PROGRESS** are explained as below:

P - **Pride & Ownership:** Every team member at DGPC takes personal pride and ownership in driving Bhutan's energy future. Achieving 25 GW by 2040 demands commitment beyond routine tasks. It requires proactive engagement, accountability, and a shared sense of mission to power the nation sustainably.

R - **Resilience:** The journey to 25 GW will encounter tremendous technical, environmental, and market challenges. Resilience empowers DGPC to adapt to evolving circumstances, overcome setbacks, maintain momentum in large-scale infrastructure development, and embrace innovation.

O - **Optimism & Opportunity:** DGPC's mandate to expand capacity is fueled by optimism and a forward-looking mindset. Viewing obstacles as opportunities for innovation and growth ensures that the organization remains agile and motivated to capitalize on emerging technologies and partnerships.

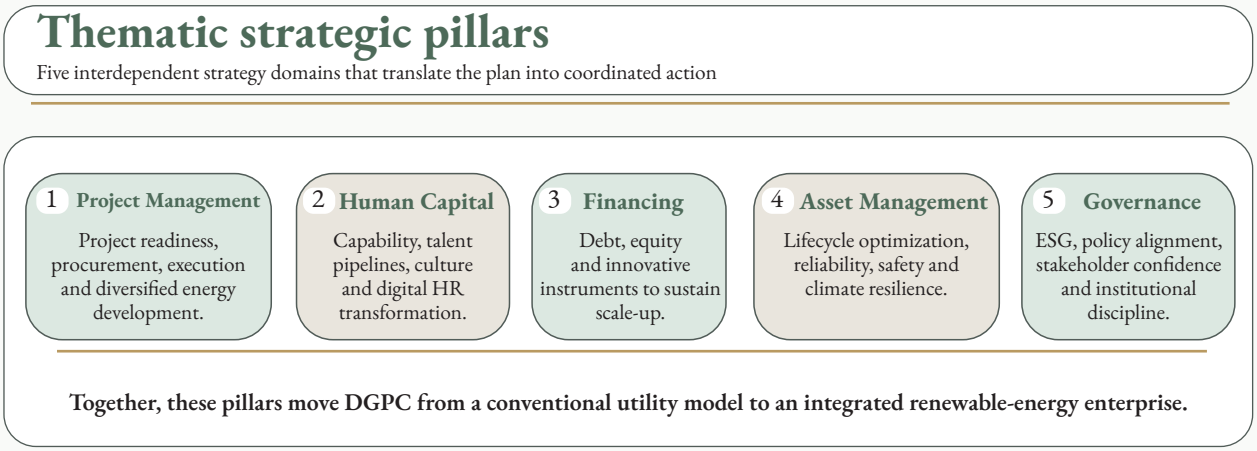
G - **Growth & Innovation:** Sustainable growth and cutting-edge innovation are critical to meeting the 2040 target. DGPC fosters a culture that encourages continuous learning, and adoption of advanced renewable technologies and creative solutions.

R - **Responsibility & Accountability:** With a mandate of national significance, DGPC upholds the highest standards of responsibility and accountability. Transparent governance, ethical practices, and rigorous project management ensure that every step toward 20 GW meets regulatory, environmental, and social commitments.

ES - **Environmental & Social Stewardship:** Expanding Bhutan's clean energy portfolio must harmonize with environmental preservation and community support and welfare. DGPC integrates sustainable practices and stakeholder engagement to protect natural resources, promote inclusive development, support private sector partnerships, and uphold the highest ESG standards.

S - **Service Excellence:** Delivering reliable, affordable, and high-quality energy services is central to DGPC's mission. Service excellence drives operational efficiency and stakeholder satisfaction, reinforcing Bhutan's reputation as a leader in sustainable renewable energy.

THEMATIC STRATEGIC PILLARS



1. PROJECT MANAGEMENT STRATEGY

The Project Management Strategy outlines a structured, time-bound, and outcome-oriented roadmap to facilitate Bhutan's energy transition through primarily integrated hydropower and solar energy development. The strategy emphasizes various plans to achieve the 20 GW additional generation capacity by 2040 through continuous project development, diversification of the energy mix, digital transformation, and adherence to best practices and standards. It aims to achieve national energy security, sustainability, and economic resilience while reinforcing Bhutan's leadership in clean energy development.

1.1 Project Planning

Project planning involves systematic evaluation of a site's potential, which includes the preparation of DPRs. The preparation of DPRs is essential to ensuring the viability and success of large-scale energy projects. By prioritizing DPRs for hydropower, pumped storage, reservoir schemes, and emerging renewable technologies such as solar, DGPC will establish a foundation for projects that are technically robust, environmentally sustainable, and financially sound.

A comprehensive DPR provides the necessary data for project design, cost estimation, environmental and social impact assessments, and resource management, while also outlining regulatory compliance requirements and community engagement strategies. This process will help reduce project risks, build investor confidence, and ensure alignment with Bhutan's national energy goals.

While DPRs for some projects are currently ongoing, DPRs for many other projects will be initiated, including the site investigations and survey works. DGPC therefore expects multiple activities to be undertaken in parallel as a part of DPR preparation, including procurement works. Some of the initiatives that are planned to complete the DPRs on time with the highest standards of project planning, design and engineering are as below:

i. **Enhance In-house Capability:** Continue DPR preparation for small hydropower projects by in-house team to strengthen internal expertise.

ii. **Strategic Collaboration for Capacity Building:** Collaborate with international consultants for medium and large hydropower projects and assign DGPC counterpart teams for capacity building in all key areas.

iii. **Expert Mentorship:** Recruit Panel of Experts for handholding the DGPC team in DPR preparation of medium/large-sized hydropower projects to ensure the adoption of the best technologies in the market and construction methodologies.

iv. **Knowledge Transfer for Mega Projects:** Prepare DPR for the Mega Hydropower projects through an international consultant with structured capacity building program for DGPC teams.

v. **Solar Project Collaboration:** Collaborate with international consultants for the preparation of the DPR for Rooftop and Utility-scale Solar projects while developing capacity for independent study.

vi. **Independent Solar DPR Preparation:** Prepare DPR for Rooftop and Utility-scale Solar project independently and expand the project development capacity.

vii. **Nurture Private Sector Engagement:** Ensure collaborative engagement by international consultants of Bhutanese nationals and entities in the preparation of DPR and support Bhutanese private sector through direct engagements where capacity exists.

viii. **Climate and Geohazard Integration:** Integrate climate resilience and geohazard risk management into the planning, design, and construction phases of all renewable energy projects. This includes mitigating potential impacts from flooding, landslides, Glacial Lake Outburst Floods (GLOFs), and extreme weather events. By proactively addressing these risks, DGPC aims to ensure that Bhutan's renewable energy infrastructure remains resilient and future ready. These assessments will include the identification of potential risks such as landslides, flooding, GLOF and soil erosion, as well as the development of mitigation strategies to safeguard infrastructure. Through these comprehensive risk assessments, DGPC will ensure that each renewable energy project is built on a solid, resilient foundation.

ix. **Staying Engaged with Government of India:** Bhutan's energy sector is closely tied to the Indian energy market with GoI financing and offtake of surplus power. The cross-border transmission grid connectivity is critical for bilateral transactions in electricity and will be crucial for future expansion and regional grid integration. Through different modalities, the access to Indian energy market and financing will drive the pace at which Bhutan develops its renewable energy resources. Staying engaged with India from the concept and planning stages of the generation capacity aspirations will ease the actual implementation.

1.2 Procurement & Contracts Management

To undertake and manage the numerous existing/ongoing/new plants/projects and expedite the procurement process, DGPC aims to strengthen its contracts and procurement functions by building competent and skilled teams. The engagement with strategic partners provide an excellent avenue for adoption of improved and efficient procurement procedures, including possibilities for efficiency gains and optimization of costs through economies of scale procurement management. To support this effort, some of the planned key initiatives are as under:

i. **Excellence in Contract & Procurement Management:** Develop excellence in Contracts and Procurement Management to achieve greater efficiency, mitigate risks, and deliver better value for money.

ii. **Benchmark to Best Practices:** Conduct gap analysis and benchmark contract and procurement processes to international standards. Engage with strategic partners and adopt improved and efficient procurement system for economies of scale efficiency gains and optimization of costs.

iii. **Streamline Procurement Methods:** Streamline procurement methods including entering into long-term framework agreements for similar activities under different projects to avoid repetitive procurement exercises this reducing the procurement processes for services, goods and works.

iv. **Memorandum of Understanding (MoU):** Signing of MoUs with RUB colleges and relevant government agencies for the related field studies and data collection, and nurture these institutes.

v. **Support Domestic Participation:** Provide enabling provisions for higher levels of participation in providing the required services, goods and works by Bhutanese entrepreneurs and contractors, with some handholding in the initial stages considering capacity and net contribution to the Bhutanese economy.

vi. **Advance Procurement Notice (APN):** Issue an **APN** to inform potential bidders of upcoming works, goods, and consultancy opportunities. This initiative promotes transparency, strengthens market engagement, and enables bidders to prepare in advance.

vii. **Build Competent and Skilled Professionals:** Capacity building through targeted training and certification programs to ensure international standards in procurement & contract management including specific requirements of Lenders. Aim at equipping DGPC with the technical knowledge and practical skills required to strengthen compliance and enhance procurement efficiency.

viii. **Integration with SAP Ariba or other AI-enabled platforms:** Fully automate the entire procurement cycle including the submission & evaluation of Bids.

1.3 Development of Renewable Energy Projects

As DPRs get ready, DGPC plans to implement the projects independently or in collaboration with strategic partners or other modalities as may emerge, with high standards of environmental responsibility, operational efficiency, and community benefit. DGPC will leverage advanced technologies and best practices to promote the long-term sustainability and success of the hydropower initiatives, including pumped storage projects (PSPs) for grid balancing and reservoir schemes for enhanced energy reliability, and solar and other renewal energy engagements.

Some of the initiatives planned to complete the project on time with the highest standards are as below:

i. **Enhance In-house Capability:** Continue implementing small hydropower projects through further support to Druk Hydro Energy Limited (DHyE) with a future outlook to take on larger projects and diverge into other renewable energy projects. DGPC will also make strategic investments in its other subsidiaries such as Bhutan Automation & Engineering (BAEL) and Bhutan Hydropower Services (BHSL) for maximizing benefits from the projected increasing demands for automation systems and hydro-mechanical and electro-mechanical equipment. Efforts will be made to introduce specialized design & engineering capabilities and establish manufacturing units to cater to hydropower as well as solar and other renewable initiatives.

ii. **Boost Foreign Direct Investments through Strategic Partnerships:** The strategic partnership arrangement has already attracted investment, facilitated technology transfer, and fostered sustainable growth of Bhutan's hydropower sector. This is critical for achieving the target of an additional 20 GW generation capacity by 2040. DGPC will continue to aggressively pursue strategic partnerships through Special Purpose Vehicles through FDIs offering up to 49% stake in hydropower SPVs in line with the National Energy Policy 2025 (NEP 2025) and up to 74% stake in solar SPVs. DGPC will also provide support to FDIs for 100% stake in solar projects.

iii. **Encourage Bhutanese Private Sector Participation:** The provision in the NEP 2025 for up to 49% stake in small hydropower projects of less than 100 MW that is expressly set aside for Bhutanese private sector investments needs to be encouraged and taken forward. DGPC will work very closely with interested Bhutanese individuals and entities to facilitate such investments. In solar projects, DGPC will provide whatever support is required in terms of partnerships and/or just handholding. DGPC will also continue to extend support to private construction companies. DGPC will further partner with the private sector through joint ventures/partnerships to establish construction and manufacturing facilities.

iv. **Risk Management:** With huge investments at stake and in ensuring energy security for economic growth and as an enabler of other investments, the timely identification of risks and managing those risks will be critical in achieving the vision and mission of the company. In the implementation of the projects, apart from the project's techno-economic viability, the assessment of the risks associated with the lenders and contracts agreements, the capabilities of the contractors and service providers, and the capacity of the management to deliver will be vital.

v. **Innovative Development Model:** To strengthen project execution and oversight, DGPC will explore an innovative implementation model that integrates advanced project management tools, automation, and international best practices. This approach will streamline development, improve efficiency, reduce costs, and ensure timely completion while maintaining the highest quality standards through proven technologies and methodologies.

1.4 Diversification of Energy Portfolio

As part of its vision to build a resilient and future-proof energy system, DGPC will diversify Bhutan's energy portfolio beyond hydropower. Expansion into solar energy, wind power, green hydrogen, battery storage solutions, and small modular reactors will create a balanced energy mix that enhances energy security, reduces dependence on a single source, and mitigates vulnerability to seasonal hydrological fluctuations. This diversification will also contribute to stabilizing energy prices, ensuring supply reliability, and strengthening Bhutan's regional energy cooperation.

Solar energy will play a key complementary role to hydropower, particularly during winter months when river flows are lower. Following the approval of DPRs for rooftop and utility-scale solar projects, as outlined in the first strategic focus area, DGPC will move forward with their development and implementation under structured project management oversight.

i. **Identification and Feasibility and DPR Studies:** Other than hydropower, the potential for and feasibility for harnessing other renewable energy resources is at its very early stages. The identification of sites and preparation of feasibility/detail project studies, especially solar, needs to be expedited. The technical and economic aspects of battery storage systems and SMRs need to be explored and understood.

ii. **Expedite Implementation of Solar Projects:** The implementation of the rooftop and utility-scale solar projects needs to be expedited through bringing in clarity on tariff setting mechanisms, support for infrastructure creation, grid connectivity terms and conditions, land acquisition, statutory clearances, and incentivization as an import substitute. This would immediately bolster domestic and international private sector investments in solar.

iii. **Capacity Building:** The implementation of solar projects are just getting started. Investments in other renewables, BESS and SMR are under consideration. The capacity to design & engineer, implement, and operate and maintain these renewables need to be built through engagement with the technical institutes, requiring on-the-job trainings in the contract documents, and collaborative efforts with partners.

iv. **Other Energy Portfolio:** Take a lead role in the exploration and introduction of alternative renewable energy sources for generation and/or storage systems, such as geothermal, wind, battery energy storage system (BESS), green hydrogen, and SMR.

1.5 Project Management

As technology evolves, DGPC needs to adopt smart project management practices and leverage digital tools such as AI, IoT, BIM and AR/VR to enhance operations and decision-making. This includes using project management software, digital dashboards, and real-time monitoring to track progress.

i. **Management Capacity:** At the core of project management will be the human resources. Creation of capacity in the

project management team to properly assess and empowering to take timely technical and financial decisions will help completion of projects at costs and in time.

ii. **Drone Technology:** Introduce drone technology for topographical surveys, river surveys, and geological mapping to enhance survey processes and monitoring. This would need clarity on the policy for drone use.

iii. **AI, IoT and blockchain:** Implement integration of AI, IoT and blockchain for automation of repetitive works, real-time monitoring and management of construction progress. By integrating AI, IoT, and blockchain, DGPC can automate routine tasks in the planning, investigation, and development of hydropower and solar projects. IoT sensors will collect real-time data, which AI can analyze to optimize design and performance, while Blockchain ensures secure and transparent data sharing and contract management.

iv. **Building Information Modelling (BIM):** Introduce BIM and Augmented Reality (AR)/Virtual Reality (VR) technologies for design validation and construction monitoring. BIM can be utilized to create accurate 3D models for design, coordination, and planning; and AR/VR technologies to visualize and validate designs on-site and in immersive environments. Together, these tools enhance accuracy, detect issues early, improve collaboration, and streamline construction monitoring from design to completion.

1.6 Diversification of Services

To maximize the potential of Bhutan's hydropower resources, DGPC will focus on expanding its services across the entire hydropower value chain. By diversifying its activities across the value chain, DGPC can increase its operational efficiencies, improve profitability, and ensure the long-term sustainability of hydropower projects. Furthermore, as part of its growth strategy, DGPC will explore opportunities to expand beyond hydropower into new sectors such as solar energy, wind energy, energy storage, and underground space utilisation. This diversification will provide new revenue streams and solidify DGPC's role as a comprehensive energy solutions provider and centre of excellence.

i. **Enhance Existing In-house Capacity:** Strengthen consultancy services capabilities for independently carrying out Feasibility/DPR studies and provide project management services in the construction of mega hydro projects, pumped storage projects (PSP), reservoir schemes, and other renewable energy sources.

ii. **Capacity Development in Specialized Technologies:** Develop specialization in geotechnical investigation, underground engineering, hydrology & hydraulics engineering, control and protection, automation and AI enabled systems, and project management, validated by certifications or completion of relevant skilling/ upskilling/training programs demonstrated through successful competency assessments.

iii. **Expand Consultancy Services:** Expand consultancy services and collaborate with Bhutanese private sector consultancies/expertise to expand to DPR studies for road tunnels, underground space utilization, water management, and other infrastructures, evidenced by client engagement and delivery through successfully implemented projects. Further explore and establish strategic collaborations with international entities to provide consultancy services outside Bhutan, progressing towards independent regional operations.

iv. **Expanding Services from Subsidiaries to Beyond the Borders:** Continue to build specialized services and DGPC branding for taking services of subsidiaries like BHSL and BAEL to outside of Bhutan.

2. HUMAN CAPITAL STRATEGY

The Human Capital Strategy underscores the pivotal role of people as catalysts of organizational growth, innovation, and operational excellence. It articulates DGPC's commitment to aligning its workforce strategies with corporate aspirations for sustainable renewable energy development in Bhutan.

Evolving in response to changing business dynamics, workforce demographics, and technological shifts, the strategy addresses pressing challenges such as talent shortages, skill gaps, and the need for organizational agility to support DGPC's expanding operations.

The strategy is anchored on three strategic pillars:

a. HR Excellence: Building a robust institutional framework and culture of performance

b. Talent Management: Attracting, developing, and retaining the right talent to meet current and future organizational needs

c. Innovation & Technology: Leveraging digital transformation and data analytics to enable strategic human capital decision-making

Each pillar is underpinned by clear objectives, initiatives, and performance indicators aimed at ensuring effective human capital development aligned with DGPC's mission and long-term corporate goals.

a. HR Excellence

This pillar focuses on transforming DGPC's Human Resources function from a traditional administrative role into a strategic partner that drives institutional capability, leadership effectiveness, and value-based culture. The key initiatives under this include:

i. **Organizational Structure Optimization:** DGPC will introduce a "C-suite structure" by establishing the positions of Chief Operating Officer (COO) and Chief Financial Officer (CFO) to enhance leadership capacity and operational oversight. Periodic structural reviews will ensure organizational agility, eliminate redundant roles, and strengthen role clarity.

ii. **Centers of Excellence (CoEs):** Specialized "CoEs" in Technical, HR, Finance, Projects & Contracts Management, Legal and other functions will be established to institutionalize best practices, expertise, and performance accountability across key functional areas.

iii. **Dual Career Pathways:** To nurture professional growth, DGPC will implement "managerial and specialist career tracks", enabling technical experts to progress within their specialization without moving into management, thereby improving specialist retention and engagement.

iv. **Resource Optimization and Shared Services:** Efficiency and scalability will be achieved through the "centralization of HR, Finance, and other support services" via a shared services model. The organization will also explore outsourcing routine HR functions such as recruitment services and payroll management.

v. **Policy, Process, and Governance Enhancement:** DGPC will review and update its "2009 HR Manual", develop Standard Operating Procedures (SoPs) for HR and Administration, and introduce Change Management Guidelines to support transitions and ensure consistency across functions.

vi. **Values and Cultural Integration:** A series of "annual values and culture workshops" will embed DGPC's core ethos into all systems: Performance Management, Induction, and Learning & Development programs to strengthen a unified, ethical, and high-performance institutional culture.

b. Talent Management

This pillar focuses on strategically attracting, developing, and retaining talent to support DGPC's operational and project-based workforce needs estimated at over 4,600 employees across construction and operational phases of upcoming projects. The key initiatives under talent management will include:

i. Talent Acquisition

DGPC will adopt a strategic workforce planning approach to align staffing with project timelines and business expansion. The key actions include:

- Developing a comprehensive "Strategic Workforce Plan" to meet construction-phase and operation-phase manpower requirements.
- Recruitment and redeployment through targeted campus programs and open-market hiring for new SPVs (hydropower and solar) and O&M phases for existing and PPP projects.
- Enhancing technological efficiency through an upgraded "E-Recruitment System" to achieve a reduction in time-to-hire.
- Process improvement initiatives, including the integration of succession planning, re-entry policies for former DGPC employees, and revised guidelines for selection and appointment of functional heads.

ii. Talent Development

DGPC emphasizes continuous learning, competency building, and leadership readiness to foster a capable and future-ready workforce. The priority initiatives include:

- *Structured Onboarding:* Implementing comprehensive e-induction and on-the-job training (OJT) programs with contractors and academic institutions, ensuring new hires complete induction.
- *Competency Inventory Framework:* Establishing a data-driven skills inventory to conduct gap analyses, maintain an up-to-date competency database, and thereby reduce ad-hoc recruitment.
- *Continuous Learning & Development:* Developing an annual L&D calendar aligned with Training Needs Analysis (TNA) and Performance Management outcomes. Assess and monitor the execution of planned activities, and a post-training ROI assessment.
- *Leadership Development:* Collaborating with renowned institutes (RIGGS, IIT, IIM, AIM, etc.) to conduct at least three leadership development programs (LDPs) annually and building a pool of high-potential (HiPO) leaders.
- *Institutional Linkages:* Strengthening partnerships with RUB, CST, and JNEC for structured internship and OJT programs including consultations of the relevancy of some of the courses offered at these institutions.

- *In-House Training:* Establishing a DGPC Training Unit to conduct regular internal programs, develop certified in-house trainers, and achieve delivery of planned e-learning programs.

- *Performance Management:* Introducing a deliverable framework for addressing non-performance and implementing Early Retirement Schemes (ERS)for workforce optimization.

iii. Talent Retention

The focus under Talent Retention is on strengthening engagement, wellbeing, and retention of top talent through an inclusive and supportive workplace. The key initiatives shall include:

- *Employee Wellness and Engagement:* Conducting at least two engagement programs annually and assigning trained mentors and counselors for all new recruits within a month of joining.

- *Continuous Feedback and Communication:* Conducting annual organizational climate surveys, implementing actionable recommendations, and 100% exit interview coverage for separated employees.

- *Health, Safety, and Wellbeing:* Ensuring annual health check-ups for all employees, conducting two mental health programs per year, and exploring employee health insurance options.

- *Rewards and Benefits:* Conducting annual compensation and benefits benchmarking** to maintain market competitiveness and drive retention.

c. Innovation & Technology

Recognizing the transformative role of technology and the transformation that DGPC has to undergo to deliver on its huge and diversified mandates, the company aims to digitally enable its HR function to improve decision-making, efficiency, and employee experience. The key initiatives include:

- Establishing a cloud-based HR data warehouse and analytics dashboards for evidence-based workforce planning.

- Leveraging AI-powered predictive analytics to anticipate attrition, identify skill gaps, and forecast workforce requirements.

- Introducing automated onboarding and self-service portals to simplify employee transactions and improve user experience .

- Strengthening data governance and creating a tech-driven culture of continuous improvement within HR systems and processes.

- Provide training to employees to ensure that they are able to effectively use these AI and other tools to ease their workplace performance and make them more productive.

These innovations will drive transparency, enhance operational agility, and position DGPC's Human Capital function as a strategic enabler of sustainable growth aligned with the organization's long-term vision of excellence in renewable energy development.

3. FINANCING STRATEGY

To realize Bhutan's ambitious vision of achieving the 25 GW renewable energy portfolio by 2040, DGPC requires access to consistent but diversified, and sustainable financing. The total investment requirement is projected at Nu. 2,192 billion (approximately USD 26 billion)[1]. DGPC's Financing Strategy is built on the principles of financial resilience, innovation, and sustainability, blending traditional and emerging instruments to optimize the cost of capital, diversify risks, and create enduring value for shareholders and stakeholders.

The strategy is structured around four strategic pillars- Diversified Capital Mobilization, Sustainable and Green Financing Instruments, Internal Capital Generation & Asset Monetization, and Innovation & Risk Management- each with specific focus areas and initiatives that align with Bhutan's green growth aspirations and DGPC's long-term corporate objectives.

3.1 Diversified Capital Mobilization

This first pillar emphasizes the need for a balanced and resilient financing mix to ensure financial stability and flexibility. DGPC will leverage both conventional and concessional financing from diverse sources, including international development partners, commercial institutions, and private investors. This approach will help prevent over-reliance on any single financing channel and allow DGPC to secure optimal terms for its renewable energy projects.

i. **Multilateral and Development Finance Institutions (MDBs/DFIs):** DGPC, with the Government, will strategically leverage Multilateral Development Banks (MDBs) and Development Finance Institutions (DFIs) for debt financing to secure low-cost and stable capital for its renewable energy investments. Unlike commercial bank loans, financing from MDBs and DFIs typically offers concessional interest rates, extended repayment periods, and flexible financing structures, making energy projects more financially viable and sustainable. These institutions also provide risk mitigation tools, technical expertise, and advisory support that strengthen DGPC's project preparation, ESG compliance, and creditworthiness. Moreover, by accessing funding through the private sector windows of MDBs and DFIs, DGPC can raise capital at the project level without relying entirely on sovereign guarantees- enhancing its financial independence and credit profile while not burdening the Government. Engaging with MDBs and DFIs thus enables DGPC to blend concessional and commercial finance which can further attract additional private investment.

ii. **Export-Import Bank:** DGPC will collaborate with the Export-Import (EXIM) banks to secure project financing for renewable energy and hydropower projects. EXIM banks offer buyer's and supplier's credit, line-of-credit facilities, and export credit guarantees that can help DGPC access concessional or semi-concessional loans. These instruments will be particularly beneficial for projects involving imported construction materials & equipment, and hydro and electro-mechanical components.

iii. **Commercial and Infrastructure Banks:** DGPC will secure project-level debt financing and syndicated loans through domestic and international commercial banks. It is expected that these institutions will provide the majority of DGPC's overall financing requirement. To ensure cost-effective borrowing, DGPC will pursue highly competitive interest rates, benchmarking against the lowest regional rates. This will be supported by innovative approaches such as competitive financing bids or other alternatives, enabling banks to compete on pricing and terms. By institutionalizing these practices, DGPC will diversify its funding base and access cost-efficient infrastructure-focused credit lines aligned with its long-term growth trajectory.

iv. **Strategic Partnerships:** To reduce the financial burden and attract global expertise, DGPC will pursue PPPs for medium to mega-scale renewable energy projects. This will leverage private equity, technical know-how, and shared risk structures to strengthen the overall financial ecosystem. Credible strategic partners also attract financing on favorable terms and conditions.

[1] *Subject to change based on the DPR study, cost escalation, and other factors*

3.2 Sustainable & Green Financing Instruments

This pillar focuses on positioning DGPC as a leader in climate-aligned capital markets through sustainable and ESG-linked financing instruments. By complying to global standards, DGPC aims to attract purpose-driven investors and strengthen its environmental and social credibility.

i. **Green and Corporate Bonds:** DGPC will issue Corporate and Green Bonds to mobilize cost-effective, flexible financing for priority projects. These instruments will expand investor participation and strengthen DGPC's access to long-term capital markets.

   a) Corporate Bond
   This will be used to raise flexible capital for refinancing existing debt, funding equity contributions, or supporting general corporate purposes, thereby improving DGPC's liquidity and capital structure. Issuing corporate bonds in domestic and regional capital markets will help DGPC establish a credible track record, attract institutional investors, and diversify its investor base beyond traditional lenders.

   b) Green Bond
   Green bonds will be specifically dedicated to funding renewable energy and climate-resilient infrastructure projects that generate measurable environmental benefits, such as hydropower, solar, wind, and storage systems. DGPC will structure these bonds in compliance with the international standards, ensuring transparency through project selection criteria, external verification, and reporting. By building a strong reputation in the green bond market, DGPC can tap into the growing pool of ESG investors, lower its cost of capital, and strengthen Bhutan's image as a global leader in sustainable development.

ii. **Climate and Carbon Finance:** DGPC will register eligible hydropower and renewable energy projects under carbon credit mechanisms and climate finance platforms. This will generate new revenue streams through the sale of carbon credits, enhance project bankability, and contribute to Bhutan's carbon-neutral goals.

3.3 Internal Capital Generation & Asset Monetization

DGPC will strengthen its financial sustainability by maximizing internal equity generation and recycling capital from mature assets. This pillar ensures that internal resources are efficiently mobilized to support ongoing and future renewable projects while maintaining fiscal discipline and operational control. DGPC will strategically monetize its mature and revenue-generating assets to unlock liquidity for reinvestment in new renewable energy projects. Together, these mechanisms will enhance financial flexibility, diversify funding sources, and ensure a sustainable cycle of asset creation, monetization, and reinvestment. For this, the company will utilize three primary mechanisms:

i. **Ownership Dilution:** DGPC will explore partial divestment of equity in select operational hydropower assets to institutional or strategic investors while retaining management and operational control. Such ownership dilution will enable DGPC to recycle capital efficiently and attract long-term investors, including sovereign wealth funds, infrastructure funds, and utilities seeking exposure to Bhutan's renewable energy sector. For this, private placement, public offering and other options as found workable will be considered.

ii. **Infrastructure Investment Trusts (InvITs):** DGPC will assess the formation of an InvIT - an investment vehicle that pools income-generating assets and distributes regular returns to investors. By transferring mature hydropower assets into an InvIT structure, DGPC can unlock significant upfront capital while retaining a majority holding to maintain influence over operations. This approach will also introduce Bhutan's hydropower sector to institutional investors and deepen regional capital market integration.

iii. **Project Securitization:** DGPC will package the future cash flows of operational assets, such as power purchase

agreement revenues, into securitized instruments to raise funds in capital markets. This will enable DGPC to access low-cost, non-dilutive financing by leveraging predictable revenue streams, thereby strengthening its liquidity and supporting the financing of renewable projects.

3.4 Innovation & Risk Management

This pillar underscores the integration of technological innovation, financial engineering, and risk management into DGPC's financing ecosystem. It promotes modern mechanisms that enhance transparency, accountability, and investor confidence. The company will utilize mechanisms as under:

i. **EPCF Modality:** DGPC will adopt the Engineering, Procurement, Construction, and Financing (EPCF) arrangement for selected projects to reduce upfront capital requirements and share implementation risks with contractors.

ii. **Blended and Impact Finance:** DGPC will structure blended and impact financing models combining concessional, commercial, and impact capital to support projects that may not be bankable but align with social and environmental priorities.

iii. **International Credit Rating:** To strengthen market credibility and reduce borrowing costs, DGPC will pursue international credit ratings by reputable agencies. This will improve transparency and attract a broader institutional investor base.

iv. **Blockchain and Tokenization:** DGPC will explore innovative blockchain-based solutions to enhance engagement with both equity investors and debt finance providers supporting Bhutan's renewable energy projects. As a gesture of appreciation and recognition, DGPC can plan to issue digital tokens to investors, formally endorsed by the Government, symbolizing their contribution to the nation's clean energy transition. These tokens will provide visibility and recognition, foster greater investor engagement, and can potentially carry future utility or non-financial privileges.

    Furthermore, DGPC can develop a blockchain-based digital token linked to specific renewable projects, enabling Conscious Driven Investors (CDIs) to directly participate in and support Bhutan's clean energy transition. The issuance of such digital green tokens can provide a transparent, innovative, and traceable mechanism to raise funds for selected renewable projects, enhancing investor engagement while showcasing DGPC's commitment to financial innovation and climate-aligned growth.

v. **Digital Solutions & Predictive Analytics:** DGPC will deploy advanced digital platforms for financial oversight, predictive analytics, and real-time decision-making to improve risk management and operational efficiency.

vi. **Foreign Exchange Risk Management:** DGPC will create a foreign exchange reserve and explore mechanisms to transact energy in foreign currencies, particularly the U.S. dollar, to mitigate exchange rate volatility.

vii. **Debt Sustainability:** Projects will be ring-fenced under Special Purpose Vehicles (SPVs) with non-recourse financing structures to ensure project-level financial independence and debt sustainability with no recourse to sovereign guarantees.

Nevertheless, considering that construction contractors of most projects, along with bulk of the construction materials and equipment, and electro-mechanical (E&M) and hydro-mechanical (H&M) components, are sourced from India, and that surplus energy during the peak season will be exported to the Indian market, it is strategically prudent for DGPC to stay engaged with Indian investors- both public and private- in the majority of the upcoming projects. Such partnerships would enhance financial viability, offload DGPC's substantial equity and debt burden, provide natural currency hedging, help mitigate power market risks through shared investment and deeper market integration and offtake security, and offset geopolitical uncertainties.

4. ASSET MANAGEMENT STRATEGY

As Bhutan's generation assets mature and new renewable technologies emerge, DGPC faces increasing challenges related to aging infrastructure, sedimentation, climate impacts, and evolving regulatory and market dynamics. Addressing these challenges requires a forward-looking and integrated approach to asset management that not only safeguards existing investments but also enhances resilience, adaptability, and competitiveness.

Accordingly, this pillar provides a structured framework to ensure that hydropower assets are managed efficiently throughout their life cycle, supported by innovation, ecological stewardship, and robust governance. The strategy is organized around five interlinked strategic focus areas.

4.1 Life Cycle Asset Management & Optimization

DGPC will adopt a systematic approach to maximize the reliability, safety, and performance of hydropower assets across their operational life. This includes comprehensive condition assessments, preventive and predictive maintenance, and prioritized refurbishment and modernization programs. By embedding life-cycle cost analysis and performance benchmarking, DGPC aims to minimize downtime, extend asset life, and maintain generation efficiency in a cost-effective manner.

4.2 Digital Transformation & Innovation

Digitalization will serve as a key enabler of efficiency and transparency in asset management. DGPC will integrate advanced analytics, automation, and monitoring technologies to enhance real-time decision-making, improve maintenance accuracy, and support data-driven investment planning. Leveraging digital tools will enable predictive insights, reduce operational risks, and enhance overall system performance.

4.3 Watershed & Smart Sedimentation Management

Recognizing sedimentation and watershed degradation as major operational risks, DGPC will strengthen collaboration with national agencies and local communities to implement integrated watershed management and smart sediment control systems. This will include afforestation, erosion control, sediment monitoring, and eco-engineering solutions to preserve reservoir capacity, protect turbines, and sustain long-term generation potential.

4.4 Governance, Safety, and Regulatory Excellence

DGPC will reinforce institutional governance, accountability, and compliance to ensure operational safety and integrity. This includes strengthening enterprise risk management systems, enhancing HSE practices, aligning with national and international standards, and cultivating a strong safety and ethics culture across all levels. These initiatives safeguard stakeholder trust and maintain high standards of corporate governance.

4.5 Energy Markets

For DGPC, strengthening its interconnectivity with the Indian grid, taking advantage of the fast growing Indian energy exchanges, and expanding into regional energy markets represent both an opportunity and a challenge. Exposure to market price volatility, evolving regional regulations, and transmission constraints demand a strategic and risk-aware approach to market integration. The Energy Market Strategy therefore focuses on maximizing export value, strengthening bilateral

energy trade with India, deepening regional integration, and building strategic partnerships to ensure stable, sustainable, and diversified revenue streams.

i. **Optimizing Benefits from being part of the Indian Grid:** Bhutan is a part of the Indian Grid and operates under India's Deviation Settlement Mechanism. As a country endowed with huge hydropower resources, Bhutan stands to gain from supporting the Indian grid through flexi-generation from its hydropower plants. However, with changing climatic conditions, unseasonal rains, and cloud bursts that make forecasting river inflows and generation erratic, DGPC will implement a series of hydro-meteorological stations across the country in co-ordination with NCHM and build a data base that can forecast river inflows more accurately. This will also ensure a safer operations of the dams.

ii. **Maximizing Export Potential:** DGPC will optimize hydropower exports by aligning generation with regional demand patterns and high-value trading hours through advanced forecasting, dispatch optimization, and market analytics. Untied generation will be strategically traded through India's Day Ahead and Real-Time Markets to capture premium pricing opportunities. To reduce seasonal and hydrological risks, DGPC will invest in reservoir-based and pumped storage projects, enabling flexible year-round generation and provision of ancillary services such as grid balancing and frequency regulation. These measures will enhance DGPC's competitiveness while ensuring consistent revenue and grid reliability. Conversely, the same will apply restricting imports during low-value trading hours.

iii. **Regional Grid Integration and Market Access:** DGPC will collaborate closely with MoENR/DoE and regional partners to strengthen cross-border grid connectivity and access to India's evolving power markets, including Term Ahead, Green DAM, Green TAM, and Renewable Energy Certificates (REC) mechanisms. Establishing a Bhutanese-owned trading company in India will enable DGPC to aggregate power from smaller projects and manage market operations directly. To mitigate market exposure risks, DGPC will develop in-house capacity in energy trading, forecasting, and deviation settlement, ensuring informed participation and stable returns.

iv. **Strategic Partnerships for Cross-Border Power Trade:** To secure long-term export certainty and attract strategic investment, DGPC will forge partnerships with leading regional utilities and power traders. This includes entering long-term Power Purchase Agreements (PPAs) with established off-takers such as Tata Power and Adani Group for the sale of surplus energy. Such agreements will provide assured revenue streams, mitigate market volatility, and enhance Bhutan's position as a cornerstone of regional energy security and climate leadership.

5. GOVERNANCE STRATEGY

The Governance Strategy outlines DGPC's commitment to strengthening institutional integrity, accountability, and sustainability through robust ESG integration, effective stakeholder engagement, and strategic enablement of subsidiaries and Centres of Excellence. It focuses on embedding good governance principles, enhancing transparency, and ensuring that all entities operate cohesively to drive responsible growth and long-term value creation.

5.1 Environmental, Social and Governance (ESG)

ESG is more than just environmental and social safeguards and includes strong governance which ensures integrity, transparency, and accountability throughout the entire hydropower and renewable energy development process. DGPC will not only adopt a structured and data-driven ESG framework to identify and manage environmental and social risks but will also aim at ensuring a strong governance at both Board and management level, promote transparent, evidence-based decision making, ensure responsible and compliant contracting, procurement, and risk management and alignment with national laws and international standards.

This approach supports Bhutan's GNH values- ensuring that growth is not achieved at the cost of ethics, people, or environment. By institutionalizing ESG, DGPC will protect its reputation and ensure hydropower and renewable energy growth that is responsible, sustainable, and bankable, and above all help further bolster brand Bhutan.

i. Re-organization of Environmental, Social & Governance (ESG) Unit

To elevate ESG as a strategic driver of Bhutan's renewable energy transformation, the Environmental, Social and Governance (ESG) Unit will be reorganized as an independent function reporting directly to the Office of the Managing Director. This will ensure that the ESG is embedded at the highest level of decision making reinforcing its role in driving sustainable financing, building stakeholder trust, and long-term project resilience.

As part of this reorganization, the Unit will be strengthened through the creation of specialist roles in key domains- environmental management, social development, gender and inclusion, and ecology/biodiversity. These experts will lead targeted initiatives across the project lifecycle, from ecological safeguards and community engagement to gender mainstreaming and biodiversity conservation.

ii. Strengthening Environment, Social, Health and Safety (ESHS) Standards and ESG Legal Integration

A comprehensive ESHS guideline will be developed encompassing key thematic areas including environmental management, biodiversity conservation, social inclusion, climate resilience, gender equality, occupational health and safety, cultural heritage, and stakeholder engagement, applicable across all project phases - pre-construction, construction, operation, and decommissioning - ensuring consistent and measurable ESG performance across DGPC's hydropower, solar and other portfolios.

Legal integration will be reinforced by embedding ESG criteria into the due diligence checklist for all new projects and investments, ensuring that environmental, social, and governance risks are identified, assessed, and mitigated at the earliest stages of project planning and financial decision-making. Integrating ESG parameters into the due diligence checklist will help DGPC to meet the expectations of international financiers and partners, while strengthening risk management and sustainability compliance across the organization.

To enhance transparency and performance tracking, DGPC will establish a centralized ESHS reporting and data management system, including ESG dashboards that enable real-time monitoring, analytics, and executive oversight.

iii. Project Feasibility Study in line with International Standards

Aligning DGPC's ESIA studies with best practices will ensure compliance beyond national regulations, enabling access to global financing and reinforcing credibility with international partners. This approach will include Cumulative Impact Assessments, climate risk analysis, biodiversity management, and social inclusion measures, among others. Further, the standardized Environmental and Social Commitment Plans (ESCPs) will define mitigation measures, timelines, and responsibilities, serving as binding frameworks to track compliance with national and international safeguards throughout the project lifecycle.

To support effective implementation, DGPC will strengthen capacity through continuous training and knowledge enhancement on ESG and international financiers safeguard requirements. Targeted capacity-building programs will be provided to DGPC staff and collaborating entities at all levels- corporate, projects and subsidiary levels- focusing on topics such as ESG risk assessment, stakeholder engagement, grievance management, climate resilience, and biodiversity conservation.

iv. Engagement with Project Stakeholder & Social Safeguards

Currently, DGPC conducts stakeholder engagement through public consultations after completing the project feasibility study, involving stakeholders from local communities to regulatory authorities. To promote more inclusive and sustainable project development, engagement shall begin at the earliest planning stages, incorporating detailed discussions and continuous dialogue to ensure community perspectives are integrated into every decision.

DGPC will implement comprehensive Stakeholder Engagement Plans (SEPs) across all projects to ensure proactive, transparent, and inclusive communication with communities, authorities, and other stakeholders. Effective Grievance Redress Mechanisms (GRM) will be instituted to provide timely channels for feedback, strengthening accountability and trust. Social Impact Assessments (SIAs) and Resettlement Action Plans (RAPs) will comply with legal requirements and project documentation vetted by the legal team to ensure full compliance.

v. ESG Reporting & Compliance

A good corporate governance is critical for DGPC to ensure transparency, accountability, and ethical decision-making across all organizational levels and project stages. By embedding governance principles into its ESG framework, DGPC can integrate environmental, social, and ethical considerations not only into its strategic and operational decisions but enhance credibility, and secure international financing and partnerships as well.

DGPC will strengthen its ESG framework in alignment with good corporate governance practices, ensuring transparency, accountability, and oversight across all organizational levels and throughout the project lifecycle. Annual ESG reports will be submitted to the Board and shareholders to provide comprehensive insight into the performance and its compliance with good corporate governance practices. Furthermore, the ESG data will undergo independent third-party audits to uphold credibility, integrity, transparency and compliance with governance standards.

vi. Corporate Social Responsibility

With international financiers and strategic partners increasingly supporting Bhutan's renewable energy development, DGPC will need to prepare and implement a Community and Local Development Plan (CLDP) meeting best practices for all projects. The CLDP will include activities related to local infrastructure, employment, skills development, and community wellbeing, ensuring benefits to those affected communities. While DGPC has previously undertaken CSR initiatives, these will now be consolidated at the corporate level and structured under the CLDP. These activities will be primarily aligned with sustainable GNH driven development objectives.

Monitoring and reporting mechanisms will be established for all CSR initiatives to ensure transparency and accountability to help stakeholders to clearly track program outcomes.

5.2 Stakeholder Engagement Excellence

DGPC recognizes that achieving Bhutan's 25 GW renewable energy target by 2040 requires strong collaboration with government agencies, regulators, investors, communities, lenders and international partners. The strategy aims to foster trust, transparency, and alignment across stakeholders to support sustainable growth, policy coherence, and access to finance.

The strategy is structured around five strategic focus areas- Policy & Regulatory Alignment, Investor Engagement, Capital Market & Financing Advocacy, Communication & Brand Reputation, and Support Local Industry Competency- outlined below.

i. **Policy & Regulatory Alignment:** To achieve long-term policy coherence and institutional synergy, DGPC will actively collaborate with national policymakers, regulators, and relevant ministries to align corporate objectives with Bhutan's renewable energy vision and economic development priorities. The company will participate in national energy policy consultations, working groups, and regulatory reform processes to advocate for policies that promote financial innovation, private sector participation, and cross-border energy trade. This engagement will ensure that DGPC's operations remain responsive to evolving policy environments while supporting Bhutan's sustainable energy transition.

ii. **Investor Engagement:** DGPC recognizes that effective investor relations are fundamental to attracting sustainable capital and building market credibility. To enhance transparency and strengthen investor confidence, DGPC will establish a dedicated Investor Relations Desk (IRD) under its Business Development Division. This unit will serve as the primary interface between DGPC and domestic as well as international investors, ensuring the timely dissemination of financial, operational, and project-related information. To expand its investor outreach, DGPC will explore establishing Investor Relations Desks outside Bhutan, particularly in India, given its significance as a strategic energy and investment partner. These external IRDs will facilitate closer engagement with potential investors, financial institutions, and corporate partners, supporting DGPC's cross-border project development and capital mobilization efforts.

iii. **Capital Market & Financing Advocacy:** To enable access to innovative, sustainable, and diversified sources of financing, DGPC will actively collaborate with financial regulators, stock exchanges, and capital market institutions to promote the development of a robust capital market ecosystem in Bhutan. This includes advocating for the introduction of green and infrastructure bonds, credit rating frameworks, and investment vehicles that align with Bhutan's renewable energy financing needs.

    Through such engagement, DGPC aims to create a supportive policy and institutional environment that facilitates the issuance of green financial instruments, attracts ESG-focused investors, and integrates Bhutan into regional and global sustainable finance networks.

iv. **Communication & Brand Reputation:** DGPC will strategically position itself as a transparent, innovative, and globally recognized green energy leader through effective communication, stakeholder engagement, and corporate branding. The company will implement a comprehensive communication strategy to enhance public awareness of its projects, environmental stewardship, and contributions to Bhutan's sustainable development.

    This will include maintaining active media engagement, publishing sustainability and impact reports, and strengthening DGPC's digital presence. Participation in international forums, renewable energy summits, and global green finance platforms will further enhance DGPC's visibility and reinforce Bhutan's leadership in climate-positive energy generation.

v. **Support Local Industry Competency:** DGPC will support the active participation of Bhutanese contractors/firms in the development of hydropower and other renewable energy projects by encouraging partnerships through joint ventures and consortiums with DGPC and reputable regional/international firms. By leveraging the technical expertise, innovation, and experience of international partners, Bhutanese firms will gradually build their institutional capacity, technical proficiency, and competitiveness in executing projects. Over time, this approach will contribute to the transfer of knowledge and technology, enabling local firms to assume greater roles in project implementation.

STRATEGIC ENABLER TO SUBSIDIARIES & CENTERS OF EXCELLENCE

DGPC is at the forefront of Bhutan's renewable energy transformation, leading the development and operation of hydropower assets and enabling strategic partnerships to drive national energy security and regional market integration. Beyond power generation, DGPC's focus has evolved towards building an integrated ecosystem of subsidiaries and Centers of Excellence (CoEs) that deliver operational excellence, innovation and institutional capability. The Hydropower Research & Development Centre (HRDC) anchors this transformation through existing CoEs in the field of electrical, mechanical, civil, geotechnical, and chemical engineering. At the same time, new CoEs in Project Management, Finance, Legal and Digital Innovation will be established to develop and further strengthen the organization's institutional and technical foundation.

For services that are not available within Bhutan and where there is a comparative advantage in either creating more CoEs or subsidiary companies to support DGPC's expanding role in the energy sector, and to bolster investments and benefits of start-ups that can grow into vital industries, DGPC will continue to expand its outreach. For joint ventures with strategic partnerships, the SPVs will be created. The strategic partners will be expected to bring in technology, expertise and experience, market access, finance and best practice governance structures.

Therefore, while DGPC primary mandate will be to create and operate energy generating assets, its role as a holding company for the SPVs and subsidiaries will grow considerably. DGPC will further strengthen its Corporate Support & Performance Division and establish a unified, performance-driven framework that fortifies the synergy between DGPC, its subsidiaries, and CoEs, enhancing operational efficiency, financial sustainability, research excellence, and innovation to achieve DGPC's 25 GW by 2040 vision.

The **BCG Matrix**, developed by the Boston Consulting Group, is a strategic management tool used to evaluate DGPC's subsidiaries and CoE based on market growth and relative market share. By plotting each subsidiary on a two-dimensional matrix, they can be categorized as Stars, Cash Cows, Question Marks, or Dogs. This classification enables DGPC to prioritize resource allocation, identify areas for investment, and make informed decisions on whether to grow, maintain, or divest specific units. The BCG Matrix provides a clear framework for balancing high-growth opportunities with stable, cash-generating operations, guiding the company's long-term strategic planning and sustainable growth objectives. As an example, the BCG Matrix for a few of the existing subsidiary companies and the HRDC is placed below:

Subsidiary	Market Share	Market Growth	Classification
Druk Hydro Energy Limited (DHyE)	High (dominant hydro operator)	High (with the accelerated investments in developing new generation capacity)	Cash Cow
Tangsibji Hydro Energy Limited (THYE)	Moderate	Moderate	Star
Bhutan Automation & Engineering Limited (BAEL)	High (within Bhutan)	High (growing automation/engineering services in Bhutan)	Cash Cow
Bhutan Hydropower Services Limited	Moderate	Moderate (with growth prospects similar to DHyE)	Question Mark / Star
HRDC (Hydropower R&D Centre)	Low (in commercial terms)	High (strategic innovation & tech growth)	Question Mark / Star

Each of the CoEs and subsidiaries will be driven through their own company specific CSP. The strategy will primarily be structured around four strategic focus areas- Strategic Planning Alignment, Standardizing Performance, Business Growth and Efficiency, and ESG Compliance. These focus areas are designed to build institutional capability, drive operational excellence, and foster sustainable growth.

i. Strategic Planning and Alignment

DGPC promotes unified planning across all entities by aligning subsidiary CSPs and CoEs' roadmaps with DGPC's CSP and DHI's 10X Roadmap. This structured approach strengthens governance and ensures that diverse subsidiaries contribute meaningfully to shared goals. Varying maturity levels across entities are addressed through facilitated planning and digital performance reviews, enabling consistent strategic execution.

ii. Standardizing Performance

A unified Performance Monitoring System is being deployed to enable real-time tracking, predictive analytics, and standardized reporting across subsidiaries and CoEs. Differences in operational contexts and data systems are bridged through common templates and digital dashboards, enhancing transparency and responsiveness at all levels.

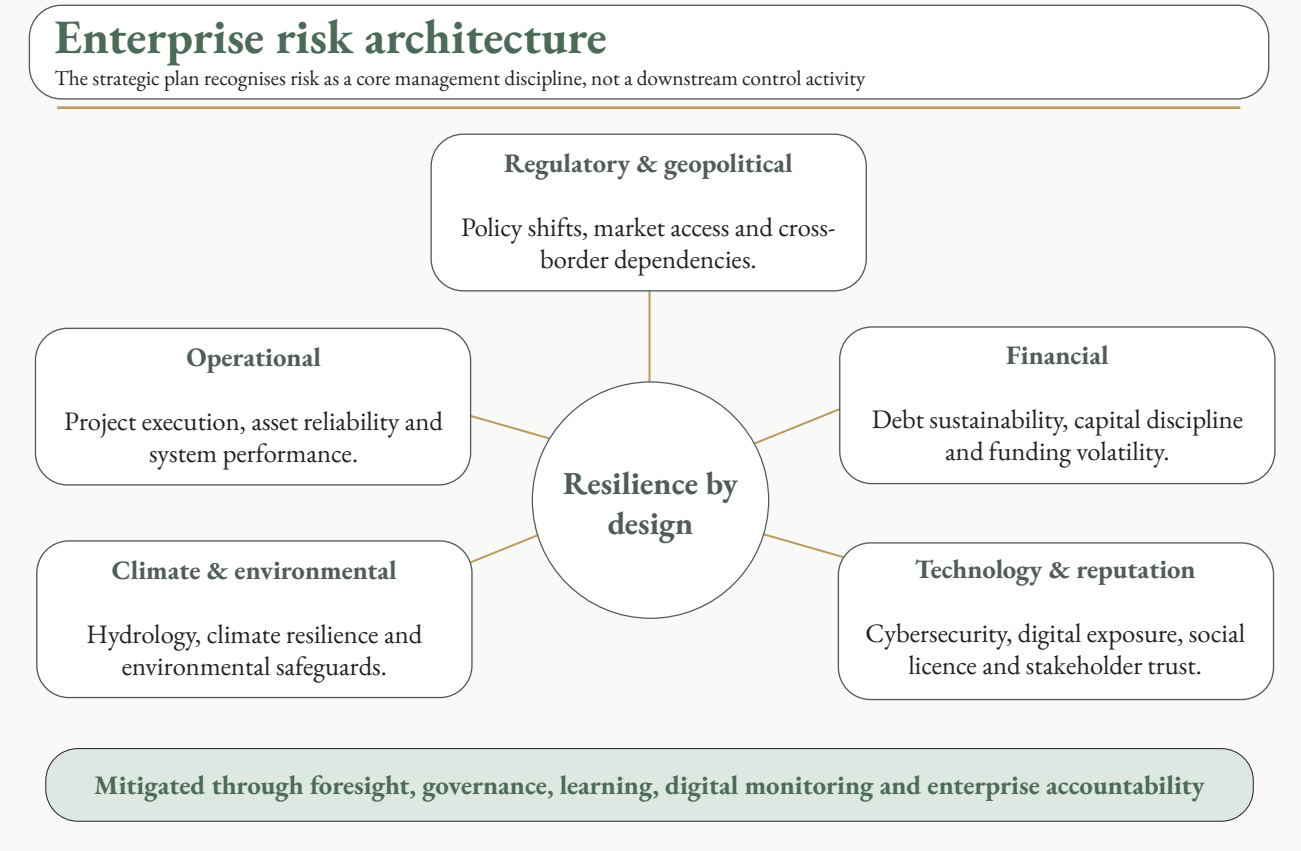
iii. Business Growth and Efficiency

DGPC is driving financial discipline, regional expansion, and innovation by strengthening cost structures, forging strategic partnerships, and promoting technical services. Gaps in technology access and market competitiveness are mitigated through targeted investments and workforce development, positioning subsidiaries and CoEs as regional leaders in hydropower and engineering services.

iv. ESG Compliance

Sustainability and risk management are embedded across operations through digital monitoring, regular audits, and capacity-building programs. Varying levels of ESG integration are addressed through continuous awareness efforts, reinforcing DGPC's commitment to responsible growth and long-term resilience.

RISK MANAGEMENT



DGPC acknowledges that the scale and pace of Bhutan's renewable energy expansion targeting 25 GW by 2040 comes with multifaceted risks encompassing financial, operational, environmental, regulatory, and geopolitical dimensions. Many of these critical risks are already being proactively addressed through the strategic measures embedded within DGPC's strategies. These measures collectively enhance financial resilience, strengthen governance, promote policy alignment, and ensure adaptive capacity in a dynamic energy landscape.

Nevertheless, DGPC maintains a comprehensive Enterprise Risk Management (ERM) Framework, aligned with DHI's overarching risk management system, to systematically identify, assess, and mitigate risks across corporate, project, and subsidiary levels. As DGPC scales its operations, it recognizes the need to further strengthen and customize the existing ERM framework to address the unique complexities and interdependencies of large-scale, multi-technology renewable energy projects anticipated within the next decade and a half and beyond.

Under this strengthened framework, DGPC will continue to provide strategic oversight at the corporate level while allowing operational autonomy for subsidiaries and project teams. This balanced governance approach ensures consistency and coherence in managing risk exposures without constraining decision-making agility or project execution.

To enhance long-term resilience, DGPC will institutionalize adaptability, foresight, and learning as core organizational capabilities. Building redundancy and flexibility into capital structures, reinforcing climate-resilient infrastructure design, and embedding knowledge-sharing mechanisms across departments will enable the organization to better absorb and respond to external shocks. Moreover, the integration of digital innovation, predictive analytics, and robust governance systems will facilitate proactive risk detection, real-time monitoring, and evidence-based decision-making.

Through these collective efforts, combining strategic foresight, digital transformation, and strong institutional capacity, DGPC aims to cultivate a risk-aware culture that safeguards operational integrity, sustains project momentum, and reinforces investor and stakeholder confidence in Bhutan's long-term renewable energy transformation.

WAY FORWARD

The Corporate Strategy Plan 2025- 2040 defines a pivotal shift in DGPC's institutional journey from being a conventional hydropower utility to becoming a dynamic, diversified, and innovation-led renewable energy enterprise. While the Plan is framed around the national ambition of achieving 25 GW of installed capacity, its underlying purpose extends far beyond these generation targets. It envisions the creation of a resilient institutional ecosystem capable of sustaining Bhutan's clean energy future through strategic foresight, financial discipline, and technological adaptability.

Looking ahead, DGPC's path to success lies in translating this strategy into sustained institutional transformation. The company will need to evolve into an integrated energy institution that orchestrates development across hydropower, solar, storage, and other emerging technologies. This will require continuous digital transformation, data-driven decision-making, and the embedding innovation and initiatives across all operational domains. By institutionalizing advanced analytics, artificial intelligence, and predictive management systems, DGPC can optimize asset performance, strengthen risk governance, and enhance financial efficiency across its expanding portfolio.

Equally critical will be DGPC's ability to strengthen financial management and sustainability through diversified and effective capital structures. The innovative use of green bonds, InvITs, blended finance, and equity partnerships will reduce debt exposure, attract global ESG investors, and enhance Bhutan's reputation in sustainable finance. The focus on regional

partnerships, particularly with energy stakeholders in India and the South and South East region, will be central to ensuring market stability, energy offtake security, and cross-border collaboration in renewable energy trade, and in ultimately securing affordable energy security for Bhutan.

The transformation envisioned by the CSP also extends to human capital and organizational culture. DGPC will cultivate a learning ecosystem that continuously develops expertise in engineering, finance, project management, and ESG governance. Through its Centres of Excellence and strategic partnerships with academic and research institutions, the company will create a pipeline of skilled professionals who can lead Bhutan's energy future with innovation and integrity. The alignment of DGPC's talent strategy with its technological and operational aspirations will be fundamental to sustaining growth and competitiveness. Above all else, DGPC will need to build its reputation and brand as a company of choice for employment to attract and retain employees. Failure to grow a highly committed human capital will derail its capability to deliver on the huge mandate.

Moreover, the CSP underscores the importance of embedding ESG principles into the core of corporate operations. As DGPC expands into new technologies and markets, governance must evolve from compliance-based frameworks to a proactive, purpose-driven model that integrates sustainability, ethical leadership, and stakeholder inclusion. This approach will ensure that DGPC's growth remains harmonious with Bhutan's environmental commitments and GNH values, while reinforcing trust among investors, partners, and communities.

The CSP further emphasizes that, to deliver on the huge mandate and build DGPC's brand, DGPC will have to closely collaborate and work with all stakeholders- the strategic partners, lenders, and especially the private sector. DGPC will need to handhold the Bhutanese private sector and support them so that they can partake and benefit from the huge emerging opportunities and investments in energy sector related construction, manufacturing and services. As DGPC grows and expands, through the experiences gained in collaborating with the strategic partnerships and the private sector, DGPC will need to transform itself from the nuances of being a public sector company to one that operates like a private enterprise but still with its social characteristics.

Ultimately, the way forward for DGPC lies in building a truly future-ready institution, one that harmonizes national priorities with global best practices, transforms challenges into opportunities, and sustains Bhutan's position as a beacon of clean energy and sustainability. The true measure of success will not rest solely in megawatts commissioned, but in the strength of institutions created, the resilience of systems established, and the enduring impact on Bhutan's economy, environment, and society. Through disciplined execution and visionary leadership, DGPC is poised to transform from a hydropower developer into a regional leader in renewable energy innovation, fulfilling both its corporate mandate and its national purpose.

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