

# **Corporate Plan (2017-2027)**

**THDC India Ltd**

Executive Summary– January 2019 (Revision- 1)



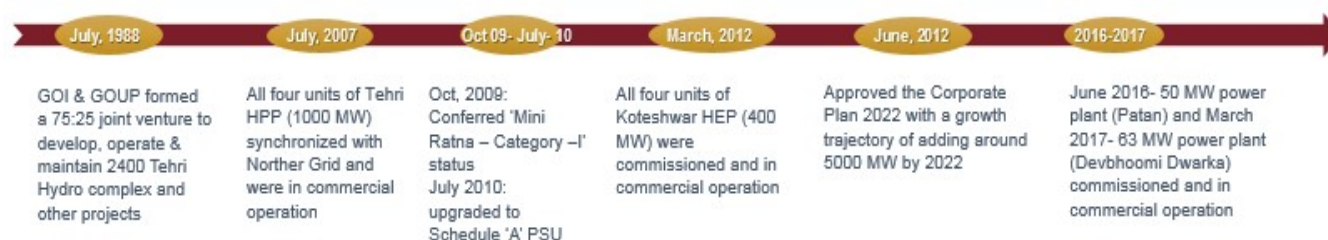
## Executive summary

*Committed to establishing itself as a global industry benchmark continually surpassing its own standards, THDCIL is expanding from reservoir-based hydropower plants to other sources of power generation*

THDC India Ltd, the erstwhile Tehri Hydro Development Corporation Ltd, a 75:25 joint venture (JV) between the Government of India and the Uttar Pradesh Government, was formed in July 1988. Initially, the key objective of the JV was the development, operation and maintenance of the 2,400 MW Tehri Hydro Power Complex and other hydro projects. The JV's object clause was later amended to include the development of conventional and non-conventional/renewable sources of energy, as well as river valley projects.

The company's key customers are in Northern India - Uttar Pradesh; Uttarakhand; Delhi; Union Territory of Chandigarh; Haryana; Himachal Pradesh; Punjab; Jammu and Kashmir; and Rajasthan. THDCIL's current operational capacity is 1,513 MW, out of which 1,400 MW is hydroelectric power (part of the 2,400 MW Tehri Hydro Power Complex) and 113 MW is wind power. Post the commissioning of the 1,000 MW Tehri power plant in 2007, the company became a profitable Public Sector Unit (PSU) and was conferred with 'Mini-Ratna Category-I' status, later being upgraded to a Schedule 'A' PSU.

**Figure 1: THDCIL milestones**



Source –THDCIL

The present status of identified generation projects is described in the figure below.

**Table 1: Existing and upcoming power plants/projects**

Scenario	Tehri	Koteshwar	Tehri PSP	VPHEP	Dhukwan	Solar	Wind	Yearly Capacity addition	Total capacity
Existing	1000	400					113	-	1513
2017-18								-	1513
2018-19								-	1513
2019-20					24	50		74	1587
2020-21						50		50	1637
2021-22			1000	444		50		1494	3131

Source –CRIS Analysis

In June 2012, the Board of THDC India Ltd approved the Corporate Plan 2022, targeting a growth trajectory that would add around four times the company's present generational capacity by 2021-22. Most of the objectives (short, medium and long term) identified as part of Corporate Plan 2022 have been accomplished, including



commencement of works for VPHEP, financing for Tehri PSP project, and diversification into the renewable space to name a few. A few of the objectives set in the previous corporate plan have been delayed and may be accomplished between 2022-27, primarily due to factors beyond the control of THDC India Ltd. This plan identifies the strategies that need to be adopted to align thoughts and scale-up in view of the strategic<sup>1</sup> shift in the company as well as the dynamics of the power sector in India.

### **Electricity demand to surge 7% in next decade– primarily driven by economic growth, increasing access to electricity and reduction in unmet demand**

India's Central Electricity Authority (CEA) projects<sup>2</sup> domestic power demand to post a CAGR of 7.1% over the next 10 years upto 2027, faster than the 6.3% CAGR witnessed in the past five years<sup>3</sup>. Demand is expected to double from 160 GW in 2017 to 318 GW in 2027, driven by improved economic activity and reforms aimed at increasing hours of electricity supply and enhanced access.

The accelerated push is on the back of Government of India's (GoI's) multi-pronged initiatives to improve energy security, such as ultra-mega power projects, 175 GW renewable energy by 2022 etc. This has resulted in installed capacity doubling in the last six years (from 2010-11 to 2016-17) through incremental addition of 105 GW of thermal energy; 39 GW of renewable energy; 7 GW of hydroelectric power and 2 GW of nuclear energy.

During the period, the country saw remarkable growth in renewable energy (CAGR<sup>4</sup> of 20.8%), followed by thermal energy (CAGR of 11.6%), primarily due to the strong policy push on capacity additions in these technologies, while other technologies grew relatively slowly (nuclear grew at 6% and hydro at 2.9%).

### **Limited new thermal-based capacities needed**

Around 20% of recently installed thermal power plants (105 GW) are untied and available for long-term contracting. While uncontracted coal-based thermal capacities will be sufficient to meet the base load requirement, gas or liquid-based capacities will be uneconomical in supporting peak requirements. Increasing concern on the environmental impact of electricity generation, coupled with fuel availability, has led to a shift in focus towards clean sources of energy.

In Union Budget 2015-16, the government announced an ambitious plan to install 100 GW of solar power capacity, 60 GW of wind power capacity, and 15 GW of other renewable energy sources by 2022. Although ~48 GW of thermal capacity is already under various stages of construction, CEA has estimated that there is no requirement for new coal plants from 2017-22, given the significant addition in renewable capacity leading to thermal plants operating at (and likely to continue operating at) lower plant load factors (PLFs).

### **New initiatives and renewed focus on hydropower to help reduce peak deficit**

Since power generation from renewable energy sources depends on factors such as time of day or climatic conditions, energy sources that can be ramped up quickly and economically are sought after. Though gas capacities are seen as ideal balancers, its utilization is extremely low in India due to limited availability of affordable fuel, as well as uneconomical tariffs.

Hydro-based energy is, thus, emerging as an economical balancer to support the ramping up and balancing requirements of the Indian grid. Currently, large hydropower plants are not considered a part of renewable energy

<sup>1</sup> In November, 2014, the Board of THDCIL approved reconstructed vision & mission. Accordingly, a `new vision "A world class energy entity with commitment to social & environment values" and new mission have been communicated internally

<sup>2</sup> Source: Draft National Electricity Plan prepared for next ten years (2017-2027)

<sup>3</sup> Five-year period during 2010-11 to 2014-15

<sup>4</sup> CAGR from 2011-17



and therefore, they are not eligible under renewable purchase obligation (RPO). However, the government is presently evaluating its policy options to support hydropower by obligating utilities to buy a certain percentage of power from hydro-based sources under hydro purchase obligation (HPO).

### ***THDCIL undertaking capacity strengthening to respond to changes in the environment***

THDCIL has been able to gain expertise in resolving various issues pertaining to project execution and has built a strong project execution team, especially in the field of hydroelectric plants. However some of the growing concern areas are natural attrition, delays in project execution (due to external factors as well as lack of integrated project management), and lower reliance on information management system and IT tools for information exchange, making the company's processes cumbersome. Furthermore, most recruits are not associated in the development of projects from concept to commissioning.

It is, therefore paramount to ensure transfer of skills so that processes can continue even if employees cease to be employed by the company. In order to circumvent these concerns, THDCIL is geared to undertake capacity strengthening measures and training interventions to enhance the competencies of its existing employees. At the same time, charting out a mechanism to ensure sustainability in terms of its capacity to be able to respond to changes in the environment.

### ***Abundance of opportunities for THDCIL***

The prevailing demand-supply situation, strong push on competitive bidding and availability of untied capacity in the power market have led private thermal/RE generators selling power at reduced margins. Further the deteriorating financial health of state discoms has led to an inability to procure power through costly, tied-up sources. In view of the surplus capacity and its cascading impact on pricing of power in the power exchange, a few states have been unwilling to procure power at rates higher than the prevailing short term exchange rates. Keeping these threats in mind, conventional power generators are evaluating opportunities and many have planned/already diversified into the renewable energy domain. Some are also looking to gain the first-mover advantage by investing in infrastructure for the fast-developing storage and electric vehicle market, such as charging ports.

With the expected increase in demand at country level, it is expected that supply overhang would end in the near to medium term. A correction is expected in the demand-supply situation and pricing of power, which would offer THDCIL immense growth opportunities. The company's key opportunities therefore lie in expansion and diversification efforts. THDCIL is well positioned to utilize its expertise and resources to diversify into the renewable energy domain in general, solar energy in particular which is expected to grow exponentially in the future. India has a continuing peak deficit and Govt is considering HPO policy which will provide the company an opportunity to supply peak power through development of pumped storage schemes and integrated basin management. Further, the company is looking to tap opportunities in neighbouring countries.

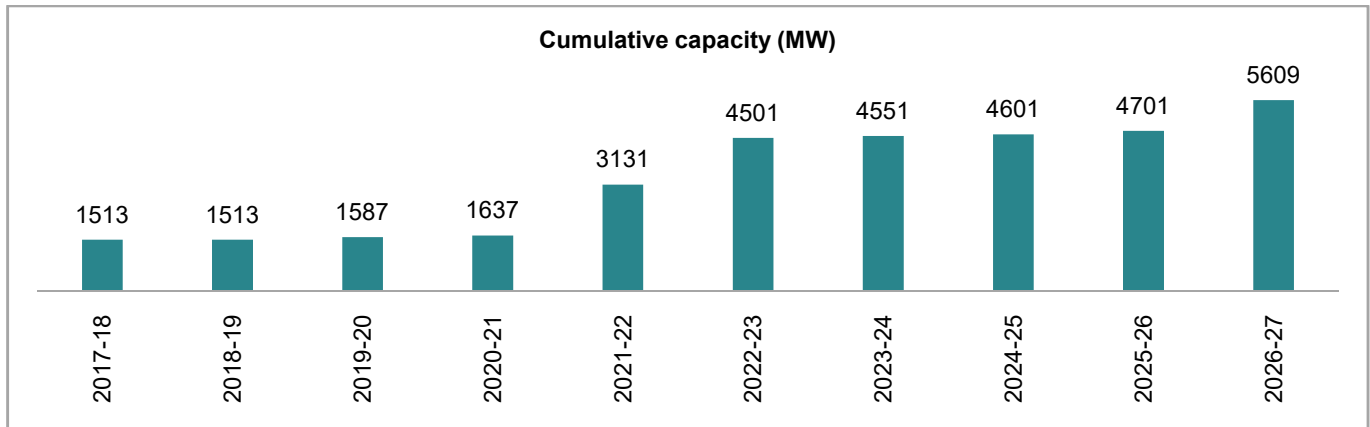
### ***THDCIL will continue to support the power sector of India as well as explore opportunities in other countries***

While THDCIL's core focus continues to be development of hydroelectric power, the company is proactively expanding through business diversification opportunities in the development of conventional and non-conventional (renewable sources) energy. With a portfolio comprising 14 geographically-spread projects (within and outside India) under various stages of implementation/development, the company has grown into a multi-project organization. The company has been at the forefront of collaborations with other firms and strategic linkages which can provide the desired value to stakeholders.

The yearly capacity addition envisaged and estimated installed capacity fuel-wise in 2027 is as indicated in the figure below:



**Figure 2: Capacity over the years**



Source –CRIS analysis (revised in January'19)

### ***With commissioning of new projects, profits are expected to increase***

THDCIL looks forward to financing new projects via debt from nationalized banks at competitive interest rates. The company also has the option of raising debt funds from external commercial borrowings (ECBs) to take advantage of the low interest rates in the international markets, as per the guidelines of Ministry of Finance. The debt tenure is in the range of 12-15 years and capital expenditure is considered in the ratio 70:30 (debt: equity).

### ***THDCIL geared up to meet long-term domestic and overseas energy needs***

THDCIL's corporate strategy, i.e., company vision and mission, has evolved in line with the power sector landscape. The strategy is derived through the sector dynamics wherein peak demand supply continues to remain a challenge and hydropower emerges as a competitive option for supplying peak power. THDCIL intends to transition from a hydropower entity to a large conglomerate and a benchmark among existing generators.

### ***Our vision***

**“A world class energy entity with commitment to environment and social values.”**

### ***Our mission***

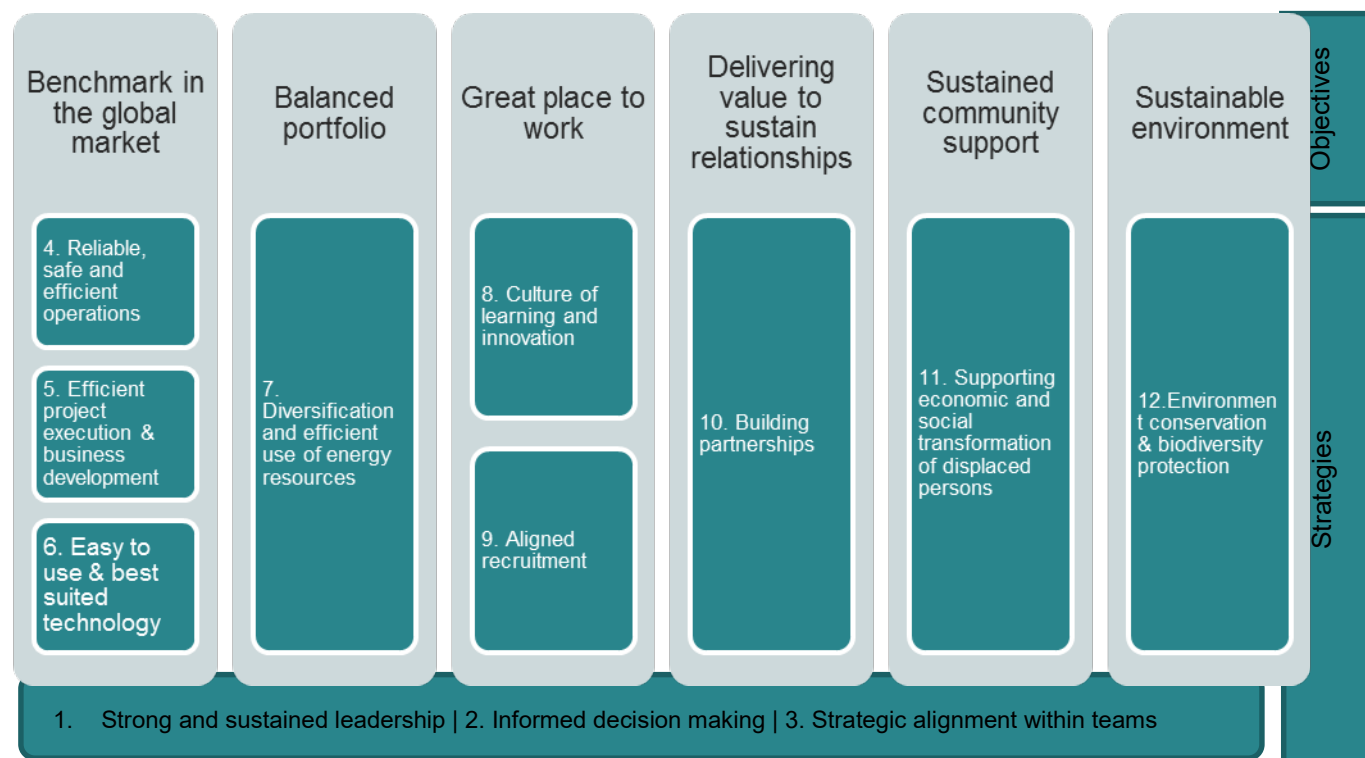
- To plan, develop and operate energy resources efficiently.
- To adopt state-of-the-art technologies.
- To achieve performance excellence by fostering work ethos of learning and innovation.
- To build sustainable value-based relationships with stakeholders through mutual trust.
- To undertake rehabilitation and resettlement of project-affected persons with human face.

### ***THDCIL's objectives and strategies***

In its pursuit to become a world class energy entity committed to environmental and social values, this 'Corporate Plan 2017-2027' outlines the key strategies that will enable THDCIL to thrive as a progressive, diversified, and energy-efficient entity. The following plan builds on the company's strong business performance achieved in previous years and embeds a framework for measuring and delivering its strategic mission and vision. The following are THDCIL's objectives and the strategies devised to achieve them:



**Figure 3: Objectives and strategies**



Source –CRIS Analysis

## THDCIL objectives

### A. Benchmark in the global market

Delivering reliable services, while operating efficiently and effectively drives THDCIL's operations. By continuously looking for ways to improve performance, the company has managed to achieve higher generation levels, resulting in it being conferred with schedule 'A' PSU status.

The company is in constant search of ways to work smartly and efficiently so as to maximize its plant operating performance, monitor operations effectively, and minimize accidents – through the adoption of the latest technologies and instruments, optimum allocation of necessary resources and stringent enforcement of safety practices. THDCIL is also striving to reduce the occurrence of time and cost overruns in project development, which will help the company achieve 'Navratna' status.

### B. Balanced portfolio

While THDCIL has developed as one of the largest reservoir-based hydropower plants, it plans to diversify into different technologies. Establishing pumped storage hydro scheme (~1,000 MW) has been a strategic step towards meeting the peaking requirements in the country. This shows the company's commitment to harnessing energy potential while ensuring environment and social values remain intact.

The company has also been active in Bhutan and is proactively evaluating opportunities in new geographical areas, as well as energy technologies to expand its portfolio and mitigate the risks associated with dependence on a single technology for generation of power. THDCIL has successfully ventured into renewable energy with commissioning of 113 MW wind power plants and by its tie-up with Solar Energy Corporation of India (SECI) to



install 250 MW solar power in the coming years. The company also looks forward to conventional energy generation, where THDCIL has been implementing the Khurja Super Thermal Power Project (1,320 MW).

The core focus on hydroelectric power generation combined with business diversification efforts will enable THDCIL's installed capacity to quadruple by 2027. With its strong technical expertise in the development of hydropower plants, THDCIL will continue to actively undertake consultancy services in hydroelectric and other sectors utilizing similar technology.

### ***C. Great place to work***

For a company to realize its fullest potential, it needs to have an engaged and motivated workforce. THDCIL aims to build a unifying corporate culture focused on pride and results through continuous learning and innovation, building a strong leadership, effective compensation systems and aligning recruitment with business requirements.

Capacity strengthening measures have been planned in THDCIL to ensure the desired level of competencies and skill sets. Likewise, THDCIL is creating an enabling environment to empower and motivate employees to take up challenging tasks. Manpower planning has been another area which THDCIL has focused on, to ensure adequate manpower for maintaining existing plants and commissioning of new projects. Further, THDCIL will continue to cultivate a culture of innovation and continuous improvement - through supporting/funding of innovative ideas, employee knowledge sharing programs and engagement sessions that will maximize opportunities for success.

### ***D. Delivering value to sustain relationships***

THDCIL plans to align teams internally and externally by building partnerships/ collaborations with other firms to combat increasing competition. This will lead to reduction in working capital cycle with suppliers/contractors, improvement in stakeholder satisfaction levels and reduced redressal time in service-level agreements in contracts.

Effective and timely decision making is key for an organization, as it aids the company in delivering value to its stakeholders and meet its objectives. THDCIL believes in fostering agility by embracing new ways of working and making logical decisions to improve organizational effectiveness. THDCIL is committed to working collaboratively to find smart solutions to the evolving energy needs of the community.

### ***E. Sustained community support***

The company is actively shouldering its commitments to ensure a sustainable future. It has accordingly prioritized activities/projects focused on socio-economic development of local communities in the vicinity of catchment or operational area. A number of projects have been undertaken/ planned by THDCIL through SEWA-THDC which is a company sponsored society, mandated for development and welfare of public in general, and for populations of catchment area/ operational area/ rehabilitation area of projects undertaken by THDCIL. The strategic areas which THDCIL has been supporting includes (but not limited to) primary health, primary and vocational education, preventive healthcare facilities, women's welfare, social charitable welfare, rain water harvesting, energy conservation and infrastructure facilities for economically weaker sections of the society. Among others, THDCIL is actively supporting initiatives launched by the Government of India, including 'Swachh Bharat Mission', 'Digital Literacy', 'Use of Energy Efficient LED Lights', 'Zero Energy Building', 'Tree Plantation', and 'Promotion of Cottage Industries'.

### ***F. Sustainable environment***

THDCIL strives to minimize the environmental impact of its activities. To meet this goal, THDCIL engages with multiple stakeholders to receive additional insights, expertise and knowledge on multiple aspects of sustainability, including obtaining feedback on environmental impact assessment (EIA) & Environment Management Plan (EMP) by making these documents public through THDCIL's website, displaying them in public information centers and circulating the brief to the villagers of project Affected Areas. A range of insight tools are used to gather



stakeholders' feedback on both the existing activities and future sustainability priorities of the company. The company's efforts extend to all aspects of reducing environmental footprint - atmospheric emissions reduction (especially greenhouse gases), measures for soil and water conservation, biodiversity protection; integration of facilities with their surroundings, reduction at source, reusing and recycling.

THDCIL believes that business should be known not just for the financial results it generates, but for the imprint it leaves on society as a whole and its impact on the environment in particular.

### **Strategies identified to achieve above objectives**

1. *Strong and sustained leadership* – The focus areas includes orientation through external leadership programs, empowering employees, job rotation, inculcation of decision-making ability and succession planning.
2. *Informed decision making* – The focus areas includes knowledge management, IT/web enabled systems, effective monitoring tools, risk management, repository of past incidents and undertake periodic review of past contracts.
3. *Strategic alignment within teams* – The focus areas includes communicating the vision/mission on an organization wide basis, restructuring and redefining roles, focus on information exchange and imbibing a culture of ownership.
4. *Reliable, safe and efficient operations* – The focus areas include stringent enforcement of safety practices, use of the latest technologies, awareness drives/ training programs, optimum allocation of resources and service level agreements with vendors.
5. *Efficient project execution & business development* – The focus areas includes centralized online monitoring of all activities related to project development with real-time updates, reduced interaction delays between teams, appropriate risk management and forecasting and management of resources.
6. *Easy to use and best suited technology* – The focus areas includes adoption of cutting edge technology which is best suited to facilitate its process, is easy to use and upgradable as the business environment changes.
7. *Diversification and efficient use of energy resources* – The focus areas include expanding into new technologies/markets and undertaking energy efficiency measures, efficient waste management practices and focusing on innovation and R&D.
8. *Culture of learning and innovation*- The focus areas include knowledge sharing, mandatory learning modules, engagement/ training modules, promoting a culture of entrepreneurship and rewards and recognition for the best performers.
9. *Aligned recruitment* - The focus areas include aligning recruitment policy with vision/mission, knowledge transfer sessions, manpower planning and yearly campus review.
10. *Building partnerships* – The focus areas include identifying stakeholders and opportunities for collaboration, maintaining a healthy relation and communicating with them on a regular basis.
11. *Supporting economic and social transformation of displaced persons* – The focus areas include skill mapping of locals, formation of self-help groups and pressure groups formation, triggered by NGOs to facilitate access to better opportunities for the local community.
12. *Environment conservation and biodiversity protection*– The focus areas includes promoting success stories and impact of its initiatives on environment protection, minimizing the impact on the environment due to its activities and further carrying out activities which add value to and restore the environment.