

Mumbai Urja Marg Transmission Project



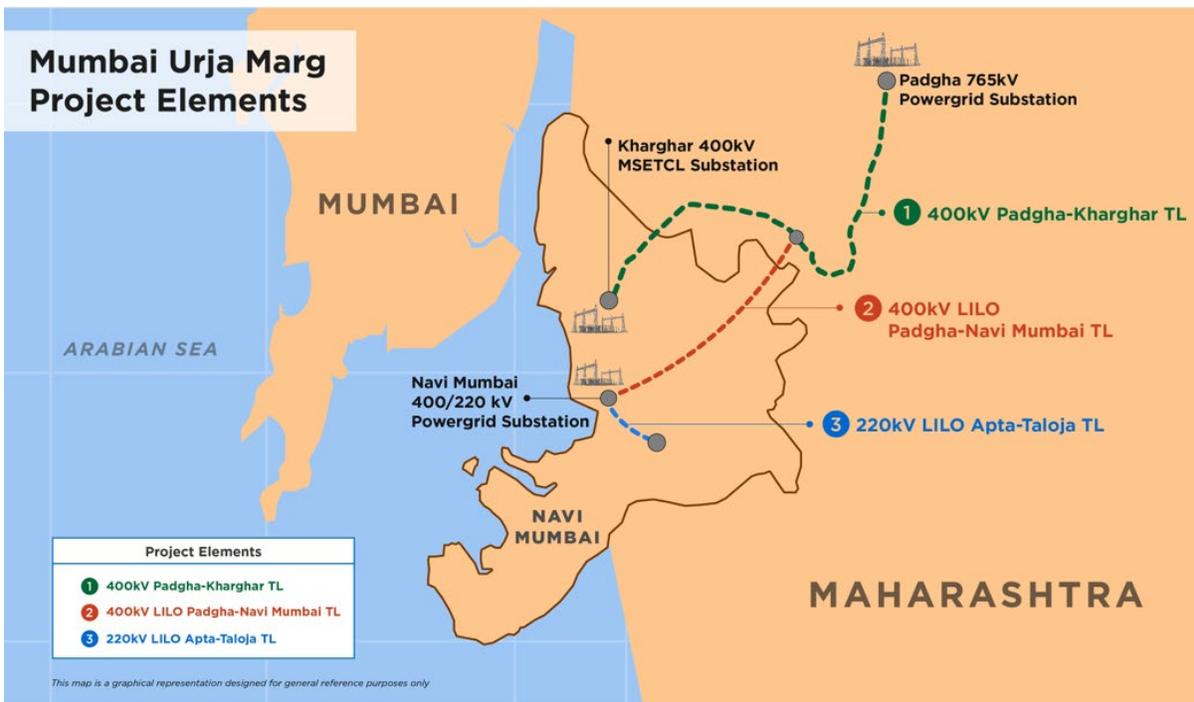
ABOUT THE PROJECT

Reliable power is a prerequisite to Maharashtra's vision of becoming a trillion-dollar economy. Owing to large scale infrastructure development, the power demand in the Mumbai Metropolitan Region (Mumbai, Thane & Navi Mumbai areas) is increasing rapidly. Mumbai Urja Marg, an inter-state transmission system project envisaged by Ministry of Power, is envisioned with the objective of providing reliable, affordable, and green power for the developing Mumbai Metropolitan Region.

Once operational, Mumbai Urja Marg will have the potential to carry more than ~2000 MW of additional power through an inter-state transmission system (ISTS) feed to the region. The project will also strengthen the existing transmission system to address the growing power demands and make it future ready in terms of energy requirement.

PROJECT ELEMENTS

Mumbai Urja Marg is made up of three elements as conceptualized by the Ministry of Power.



- **400 kV D/C (quad) Padgha to Kharghar Transmission Line.** This high voltage line will connect Powergrid's 765kV Substation at Padgha with MSETCL's 400 kV substation at Kharghar. This additional ISTS feed will have the potential to carry ~2000 MW of reliable power to Mumbai Metropolitan region thereby reducing over dependency on the existing Padghe- Kalwa Line which currently is the only corridor bringing power inside the region.
- **400 kV D/C Padgha to Navi Mumbai LILo Transmission Line.** This line would be instrumental in reviving and energizing PowerGrid's 400/220KV substation which has been lying idle since 2012. The 400KV LILo will energize the PowerGrid's Navi Mumbai Substation and will significantly relieve the overloaded Kharghar and Kalwa Substations ensuring reliable power flow for the entire Navi Mumbai region.
- **220 kV D/C Apta – Talaja LILo Transmission Line.** This line will ensure downstream connectivity by connecting Navi Mumbai substation to Apta -Kalwa/Talaja line at 220 kV level, thereby creating Navi Mumbai -Kalwa, Navi Mumbai – Apta and Navi Mumbai – Talaja line. This will decongest the overloaded Apta-Kalwa-Talaja network, immensely benefitting the industrial and residential units in the region.

IMPORTANCE OF THE PROJECT

Mumbai Urja Marg Transmission project will develop a critical energy lifeline for Mumbai and will support Mumbai's ambition to become a trillion-dollar economy

Currently, the peak power demand in Mumbai Metropolitan Region is around 4500 MW. This requirement is partly met through the 1877 MW power generated in Mumbai while the remaining power is catered from outside Mumbai through the current transmission network which allows import of power to MMR. However, it is close to its full capacity in terms of utilization. This means that in case of outage of any transmission line (due to fault or maintenance), the system operates in a critical state where any further tripping (of lines or internal generation in Mumbai) can result in a load shedding and any further tripping or overload can lead to blackout situation. The October 2020 event is a case in point. In view of this situation, it is imperative to strengthen the existing transmission network through additional ISTS feed.

Further, with accelerated growth under the trillion-dollar economy ambition, power demand is expected to increase exponentially. This will add to the already increasing organic power demand growth that the region is experiencing currently.

Mumbai Urja Marg Transmission project will help establish a critical energy lifeline for Mumbai Metropolitan region that will have the potential to carry more than 2000 MW of additional ISTS feed. The project will also help in decongesting its present transmission network which will enable increased power flow in the region as well.

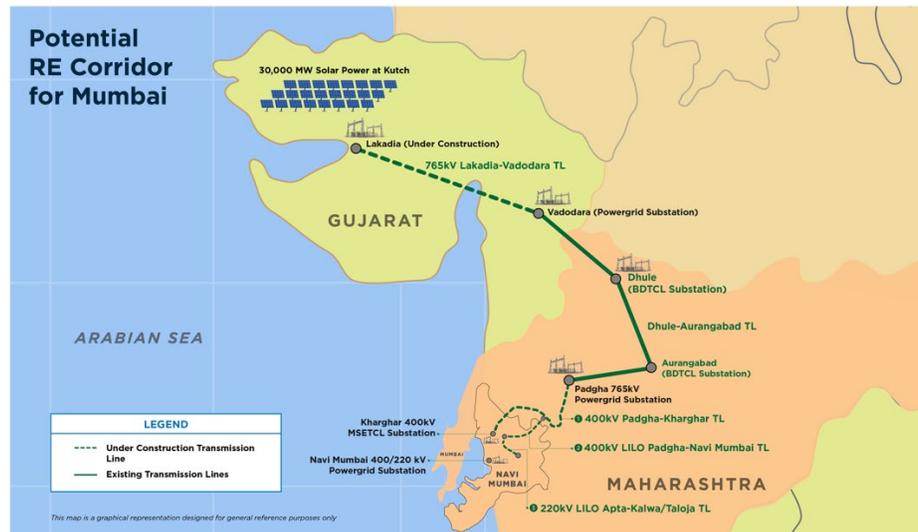
Mumbai Urja Marg Limited will support Navi Mumbai's ambition to emerge as a Data Centre hub

Navi Mumbai is rapidly emerging as the choice of destination for Data centers. With load requirement of ~330 MW, data centres are energy intensive. One of the key requirements of these data centers is, therefore, availability of continuous, reliable, and quality power.

Mumbai Urja Marg Limited Transmission Project, by decongesting present transmission network of the region and establishing an additional in-feed capacity, will efficiently cater to the growing energy needs posed by the emergence of data hubs.

Mumbai Urja Marg Limited has the potential to make Mumbai's energy transition to RE a reality

Mumbai aims to meet 25% of its electricity demand through renewables by 2025. However, currently 95% of Mumbai's power requirement is met through thermal power with only 5% is coming from RE sources. As seen in the adjoining picture, a large amount of RE power generation is coming up in the state of Gujarat, which shall be getting evacuated up to Powergrid's 765 kV substation at Padgha.



Mumbai Urja Marg Transmission project will provide the last mile connectivity from Padgha to Kharghar & Navi Mumbai substations. As a result, a significant portion of power demand in the Mumbai Metropolitan region could be met through RE power, in the coming years.

Mumbai Urja Marg Limited has the potential to bring power at competitive rates by addressing Mumbai's long standing transmission constraints

Transmission constraints remains a long-standing problem in Mumbai. It limits procurement options from outside and helps rely upon internal generation sources within Mumbai region. These generating stations enable islanding of Mumbai grid in case of a grid disturbance, but on the other hand, they may not be always the cheapest source of power, which can otherwise be sourced from outside, should a sufficient and reliable transmission interconnection be available. Strengthening the transmission interconnection, will open possibilities and options for the DISCOMS to source cheaper power from other sources, which can help optimize the cost of power for consumers in the region.

Mumbai Urja Marg Transmission project will address Mumbai's long-standing transmission constraints as well as enhance flexibility in power procurement for Mumbai. Distribution licensees will be in a strong bargaining position in terms of power procurement agreements.

Once operational, Mumbai Urja Marg Transmission project will be a gamechanger for Maharashtra with wide reaching benefits for people and industries in the region. It will increase power availability, improve system reliability and security, allow flexibility and choice to source cheaper and greener power.

For more details, please visit <https://www.mumbaiurjamarg.com>
