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## Managing the Development of the World's Largest and Most Sustainable Net-Zero Campus

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Over the course of the last year, Said Mneimne and his team at Hill International have been working on a unique project. Last year, Hill International was selected by the Indian Oil Corporation Limited (IOCL) to provide project management consultancy services for the development of their new research and development campus. Named the Indian Oil Technology Development and Deployment Center, the project has a \$275 million budget, and, when completed, will encompass 60 acres.

Updating facilities built in the 1970s, the IOCL's new research campus will provide space for research into emerging green technologies. The campus will feature a center for alternative and renewable energy and a center for nanotechnology, as well as industrial laboratories for the study of carbon nanotubes/batteries, biotechnology, pipelines, petrochemicals, catalysts, and applied metallurgy. Additionally, the site will include recreational, administrative, dining, and utility facilities.

In addition to studying and implementing new green energy technologies, the campus itself aims to be a paragon of green building and management, planning to be the largest and most sustainable net-zero campus in the world.

Hill International initially became involved in the project in October of 2019. They worked with three separate firms in creating the original design for the project: RSD from the United States, Ong & Ong from Singapore, and a local architecture firm called VYOM. Working with these firms, Hill International submitted the original master plan and DPR.

While these plans were being drafted, the world experienced the outbreak of the COVID-19 pandemic. However, while most of the AEC industry experienced near shutdown, Said Mneimne credits his team for being able to “regroup”, which meant that the drafting of the plans was only minimally affected. Mneimne and his team were soon able to get the project back on track, finishing the plans in mid-June, just one month after their original deadline. Despite the challenges of learning to work remotely, the team was able to effectively execute the proper procedures to keep the project relatively on schedule, submitting their design plans at the beginning of July 2020.

After submitting their design plan to the client, minor alterations were made to the plan to fit the budget. After another plan was submitted, the client had to make a decision on whether to increase their budget by up to 25 percent or further alter the plans. These deliberations took several months, and, in late February, Mneimne and his team received word that the IOCL board had approved the budget increase.



This means construction on the project could potentially begin as early as mid-April 2021. For Mneimne and his team, the real work on the project now begins. As soon as the proposal was accepted, Mneimne travelled to India to meet with the client and begin mobilizing the construction management team; one of the main tasks of this visit is appointing a new project director for the construction management phase of the project.

Selecting the right leadership for a project of this magnitude is certainly in the highest order of concerns; in addition to being a large and expensive project, it carries the added rigor of living up to the project's expectation to be the world's largest and most sustainable net-zero campus.

Mneimne believes that this begins in the "black and white", meaning that their plans are engineered to meet the expectations. With such a large and technologically advanced project in their path, each step of the plan has to be done not only in a timely manner but also perfectly. This means support from a number of key areas.

The first level of this support comes from laboratory engineers in the United States. These engineers are tasked with specifying materials and ensuring they are implemented and meet the proper specifications.



The next level of support is architectural, and, because this project contains "elaborate architectural features", Mneimne believes this level is critical. For this support, the team is again turning to Singapore-based Ong & Ong who will deploy their architects to monitor the construction of these unique features.

Finally, the last level of support is management, which is a specialty for Mneimne and his team at Hill International. With concerns such as contractual negotiations, jobsite safety, quality assurance, and schedule management, there is a lot at stake in this project. On top of that, Mneimne and his team are

dealing with contractors who haven't necessarily worked on a project of this scale, so there will be a lot of close work along the way.

Despite the challenges posed by such a large undertaking in a smaller construction market, the team at Hill International is prepared to meet the coming challenges.

Hill International will be working with Indian company Shapoorji Pallonji on the \$300 million construction package.

