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Subject: Request For Proposal No.: CDDEP-OFI-1

REQUEST FOR PROPOSALS: BUSINESS PLAN TO DEVELOP A NATIONAL OXYGEN GRID

The Center for Disease Dynamics, Economics & Policy (CDDEP) is seeking proposals from capable and experienced organizations to assist in the development of a business plan for a national public-private program to improve the oxygen supply chain in India.

Oxygen for India Overview

OxygenForIndia is a volunteer-run campaign to deliver lifesaving medical oxygen to those who need it the most, as quickly as possible. Our goal is to ensure that no one in India dies due to the lack of medical oxygen. In the short term, we are deploying 40,000 reusable oxygen cylinders and 20,000 oxygen concentrators in 20 urban and rural centers across India. Meanwhile, are working with partners to establish a stable, reliable oxygen supply system for India for the long term. OxygenForIndia is supported by CDDEP in the United States and the Tech4Health Foundation in India.

Project Overview and Scope

India continues to face a significant burden of morbidity and mortality due to lack of availability of medical oxygen. In order to support Oxygen for India's goal of ensuring that no one in India suffers or dies because of lack of access to medical oxygen, the Center for Disease Dynamics, Economics & Policy (CDDEP) is working in partnership with other organizations to create a national oxygen grid that will be of service to the nation.

The goal of the national oxygen grid is to solve the problem of oxygen shortages across India both during the Covid pandemic and beyond. The premise of the grid is that there are roughly 1500 PSA (pneumatic swing adsorption) plants that will be set up in mostly peri-urban and rural health care facilities in both the public and private sectors. In addition, there are proposals to set up cryogenic tanks that can be refilled periodically from larger oxygen generation plants.

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We propose a national grid that can leverage the increase in oxygen generation capacity to build a national oxygen grid that uses a combination of existing liquid medical oxygen assets, storage, and transportation tanks and cylinders, with incoming assets of pneumatic swing adsorption (PSA) plants, oxygen concentrators, and cylinders.

The scope of this project would be in two phases. Progress to the second phase would be conditional on findings in the first phase.

At a high level the first phase would cover the following:

1. Demand side: Carry out a national needs assessment based on disease burden (Covid and beyond) by state and identify 100 high priority districts for intervention.
2. Supply side: Design a national oxygen grid by mapping current production and transportation capacity, new equipment being procured and map out where there are gaps.
3. Design a framework to determine the health of the oxygen grid for a geographical region
4. Design a pilot in two states that will operationalize the concepts of the grid and test the achievement of goals and KPIs

As part of this work, the consultant will

1. Study the supply chain for oxygen in rural and urban India, and identify relevant players active in India in the field of oxygen supply at various levels – large-scale generation, transportation, distribution, and storage.
2. Study demand for oxygen both during Covid and non-Covid periods by relying on existing state-level oxygen audits.
3. Identify gaps and root causes for disruption in oxygen supply during Covid and non-Covid times. Where are supplies missing, erratic, mostly reliable, and entirely reliable? How is this distributed across geography and type of healthcare institution? Are there differences between public and private facilities?
4. Operational Planning and Logistics: The National Oxygen Grid will have to establish operational plans for the deployment of assets, priorities, and rules for when these will be moved to deal with emergencies such as future waves of Covid or other diseases. This would enable the entire set of resources of the grid to be deployed to fight oxygen shortages.
5. Maintenance Operation: A framework will have to be put in place for regular maintenance and servicing of oxygen assets across the grid, including contracts with local service providers.
6. Design a framework for determining the health of the grid at levels of state, and district down to the PHC; and develop measurement tools, processes, and metrics to assess the capability of a geographical region or institution to respond to oxygen events (lack or surplus).
7. Financial modeling: Our preliminary financial modeling indicates that it is possible to build a self-sustaining national grid. However, these back of the envelope calculations will require more detailed financial models and projections to inform the long-term operation of the grid. Developing these will be part of this effort.

8. Beyond supply, are there other issues including pricing, knowledge, and skills among the providers for optimally using oxygen and reducing waste, administrative capacity (failure to order supplies on time) that limit the availability of medical oxygen?
9. Depending on the suitability and acceptability of the proposed model, to assist in implementing the model. This last component is optional and can be priced separately from the items above.
10. Separate from this, the consultant is expected to prepare a plan for increasing for improved cylinder supply. Currently, most cylinders are produced in China and we would like to see a plan on how the private sector can play a role in expanded production. The consultant will identify challenges to self-sufficiency and find solutions to address them.

The second phase of the project will involve implementing a pilot in two states (Uttar Pradesh or Bihar and Madhya Pradesh or Karnataka) to create state-level oxygen grids. Based on this experience, the consultant will help prepare a plan to scale up nationally with specific performance standards and benchmarks. This includes the design of the institutional architecture for the operation of the National Oxygen Grid.

Requirements

This request for expressions of interest is aimed at private and public consulting organizations that have demonstrated strengths in the following

- A good analytical understanding of the infrastructure market including electricity grids, and logistics and supply chains
- Strong understanding of the processes of public-private partnerships and business model development.
- Experience of working with public and non-profit sectors
- Experience in design, implementation, and scaling up of infrastructure projects at state and national levels.
- The consultant should have experts on oxygen supply on their team.
- These terms of reference are for a fixed price study.

After the proposals are received, CDDEP will shortlist organizations that meet the above requirement and request the shortlisted organizations to make the presentation on the proposed approach and skill-sets of the team. Based on the review of the submitted proposals and the presentations, CDDEP will make the final selection. In evaluating the proposals, a weight of 75% will be given to the strength of the proposed team and 25% to the approach. The selected consultant might be requested to modify the proposal if some key elements are missing. The price will be negotiated with the finally selected consultant.

Timeline

The consultant is expected to present an inception report within three weeks of commencement of the project, an interim report within 8 weeks, and a final report within 12 weeks of commencement. The reports will be prepared, and studies and reviews will be undertaken in close consultation with CDDEP.

Responding to this RFP

Please send your response to this RFP including both a technical and a financial proposal at brar@cddep.org before the deadline indicated. No requests for extensions will be entertained. Selected proposals will be invited for a presentation to an expert committee that will then determine the final selection of consultants. If you have any questions about this RFP, please email brar@cddep.org. Answers to all questions will be posted at OxygenforIndia.org.

About CDDEP

The Center for Disease Dynamics, Economics & Policy (CDDEP) produces independent, multidisciplinary research to advance the health and wellbeing of human populations around the world. CDDEP was founded with the objective of using research to support better decision-making in health policy. CDDEP researchers employ a range of expertise—including economics, epidemiology, disease modeling, risk analysis, and statistics—to conduct actionable, policy-oriented research on malaria, antibiotic resistance, disease control priorities, environmental health, alcohol and tobacco, and other global health issues. CDDEP projects are global in scope, spanning Africa, Asia, and North America, and include scientific studies and policy engagement. The CDDEP team is experienced in addressing country-specific and regional issues, as well as the local and global aspects of global challenges, such as antibiotic resistance and pandemic influenza. CDDEP research is notable for innovative approaches to design and analysis, which are shared widely through publications, presentations and web-based programs. CDDEP has offices in Washington, D.C. and New Delhi, India and relies on a distinguished team of scientists, public health experts, and economists around the world.