



USAID
FROM THE AMERICAN PEOPLE

THE POWER OF AI IN THE ENERGY SECTOR: AUTOGRID'S INNOVATIVE APPROACH TO CLEAN ENERGY

The energy sector is undergoing a rapid transformation, driven by the urgent need to address climate change and reduce carbon emissions. With the growing adoption of renewable energy sources and the increasing penetration of connected devices, power systems face new challenges and opportunities. AutoGrid, a company founded more than a decade ago with the objective to use artificial intelligence-driven software to optimize power demand, partners with USAID under the South Asia Regional Energy Partnership (SAREP) Partnership Fund (SPF) to design and deploy a Behavioral Demand Response (BDR) program across Delhi National Capital Region (NCR).

In 2021, AutoGrid helped create a transformative BDR program across Tata Power Delhi Distribution Limited (TATA Power-DDL), just as India actively deploys smart meters, the last mile connectivity for real-time load profile. Through SPF, AutoGrid is scaling this pilot using its cutting-edge AutoGrid Flex™ platform to run BDR programs across residential, commercial, and industrial (C&I) customer segments. The AutoGrid's SPF BDR project will cover approximately 85,000 enrolled residential and commercial customers in Delhi.



PHOTO: AUTOGRID

AUTOGRID'S SPF

AutoGrid's SPF BDR project aims to address the following challenges:

- **Peak load shaving:** The project aims to provide capacity support at a system level during peak hours (typically the late afternoon between 3 pm-5 pm and the night between 10 pm - 2 am). Though these peak hours occur for only 100-120 hours or less than 2% of the total hours in a year, the cost of network augmentation and power procurement during these hours would be much higher.
- **Network hotspots:** The project aims to provide localized target network capacity support, which refers to areas that experience higher demand compared to the rest of the grid.
- **Effective utilization of smart meters:** The project aims to provide interval data necessary to evaluate the consumption pattern and allow corrective optimization to manage the peak load demand better.



PHOTO: AUTOGRID

The relevant stakeholders and beneficiaries of AutoGrid SPF-BDR project are state-owned utilities, consumers, regulators, and policymakers. Each of these stakeholders will benefit in different ways:

- Utilities can manage peak load hours by relying on consumer participation to shed or shift the peak load.
- Regulators can design framework for providing incentives for consumer participation, which will ultimately lead to reduced dependence on fossil fuels, and support more innovative and greener energy efficiency efforts.
- Capex savings from offsetting payment for peak hours will bring significant savings to utilities even after paying incentives to participating customers.

AutoGrid is committed to advancing opportunities and increasing the number of women active in the energy sector. As part of the project, AutoGrid is participating in the South Asian Women in Energy platform to help advance gender equality and social inclusion in the sector.



Peak Load Shaving



Network Hotspot



Smart Meter

"...the mission and the goal of this project – to deploy technologies that help accelerate the clean energy transition and achieve net zero emissions."

John Perry, Vice President,
Marketing & Communications
AutoGrid



Success of AutoGrid's SPF BDR project is defined by the following outcomes:

- Energy and capacity shed
- Improved utility network reliability during peak hours
- Capital expenditure (capex) saved for the utility by reducing peak-hour demand
- Improved asset health by reducing grid stress during peak hours
- Reduced carbon footprint by reducing the use of fossil based power during peak hours
- Increased customer engagement and awareness and its purpose to reduce carbon emissions and incentivize participation.

The program's ultimate goal is to provide a cost-effective solution that addresses peak-hour demand, reduces dependence on fossil fuels, and support India's clean energy transition while bringing economic benefits to utilities, customers, and the community.

As the world continues to work towards a sustainable energy future, it's clear that AutoGrid- and its SPF supported BDR project are part of the solution. By empowering consumers and utilizing innovative technology, AutoGrid is helping to create cleaner, more efficient power grids.

ABOUT SAREP PARTNERSHIP FUND (SPF)

The SAREP Partnership Fund (SPF) supports market-based transformative solutions to enable the clean energy transition, particularly by engaging the private sector, local organizations, and new, underutilized partners. It also harnesses innovative business models, solutions, technologies, resources, experiences, and networks of relationships that exist across stakeholders. SPF aims to expand and maximize the impact of USAID resources innovatively and sustainably through activities designed, owned, and implemented by grantees under the SAREP Program.

CONTACTS

South Asia Regional Energy Partnership (SAREP)
Commercial Tower of Novotel-Pullman Hotel
(Floor-6), Asset No. 2, Aerocity Hospitality District,
IGI Airport, New Delhi-110037
Phone No: 011- 41287150
Email: comms@sarep-southasia.org

AutoGrid Corporate Headquarters
255 Shoreline Drive, Suite 350
Redwood City, CA 94065

AutoGrid India Office
1st Floor, A Wing, IndiQube Alpha
Kadubeesanahalli, Outer Ring Road
Bengaluru, Karnataka 560103 India

Email:
Lalima Goel <lalima.goel@auto-grid.com>
John Perry <john.perry@auto-grid.com>