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Knowledge Series on Deployment of Electric Vehicles in South Asia (in 3 parts): EV Integration – Challenges and Way Ahead for Utilities in South Asia

Part-I: Thursday, March 07, 2024 | 5:30 PM to 7:30 PM IST | [Register here](#)

Part-II: Thursday, March 21, 2024 | 5:30 PM to 7:30 PM IST | [Register here](#)

Part-III: Thursday, April 04, 2024 | 5:30 PM to 7:30 PM IST | [Register here](#)

I. Concept Note

To fight climate change and achieve Net-Zero targets of South Asian countries, efforts are being deployed to decarbonise the transport sector, which is one of the biggest contributors to carbon emissions. As a step further to shift towards clean fuel alternatives, Electric Vehicles (EVs) powered by clean energy is being considered worldwide as a future solution to the growing transport emissions. Multiple governments have made policy announcements and provided incentives to accelerate the adoption of EVs.

EVs are a new electricity consumer for the utilities. Utilities play a critical role in facilitating EV charging. They are responsible for providing electricity connections for the EV charging infrastructure, implementing the EV tariff structure approved by the SERCs/ JERCs, ensuring that EV charging infrastructure is connected and operated and maintained properly, preventing improper use of EV charging infrastructure, managing the distribution network, and undertaking grid upgrades based on growth in load including from EV charging requirements. EVs provide an opportunity for utilities to significantly grow their consumer base by selling more electricity for EV charging thereby increasing the revenue. But the challenge that utilities face in this process is to ensure the stability of grid and reliability of power to all the electricity consumers. If several EVs are connected to the grid at the same time, then it could adversely impact the grid, causing power overload. The problem can get worse if the grid is already experiencing a peak demand. Upgrading the grid could be a solution to this but it will be capital intensive process and there could be issues of land use restrictions (especially if the distribution utility is in a dense area).

With the above background, **USAID's South Asia Regional Energy Partnership (SAREP)** program in collaboration with the **South Asia Group for Energy (SAGE)** is organising a **Knowledge Series on Deployment of Electric Vehicles in South Asia (in 3 parts): EV Integration – Challenges and Way Ahead for Utilities in South Asia** for the South Asian countries to address the concerns of utilities and to build their capacity to adopt EVs.



This is also part of the regional Hub, which is the coordination and communication platform within the USAID’s South Asia Regional Energy Partnership (SAREP) program.

SAREP is the regional flagship program of The U.S. Agency for International Development (USAID) which improves access to affordable, secure, reliable, and sustainable energy in six countries – Bangladesh, Bhutan, India, Maldives, Nepal, and Sri Lanka – to strengthen systems and processes, in line with the economic and energy-security priorities of these countries. SAREP’s interventions focus on energy and market integration, advanced energy solutions and systems, utility modernization, and private sector participation and engagement.

SAGE is a consortium comprising USAID, the United States Department of Energy (DOE) and three national laboratories: the Lawrence Berkeley National Laboratory (LBNL), the National Renewable Energy Laboratory (NREL) and the Pacific Northwest National Laboratory (PNNL). The consortium represents excellence in research and international development in the energy sector to advance the Asia Enhancing Development and Growth through Energy (Asia EDGE) priorities in the South Asia region.

This *Knowledge Series* webinars will enable participants to understand the impact of EV charging on grid, charge management techniques and smart charging technologies, managing future load from EV charging, alternatives to grid upgrades, understanding consumer charging behaviour, and tariff designing.

2. Agenda

Time (IST)	Session details	Proposed Speaker
Session I: Thursday, March 7, 2024; 5:30pm – 7:30pm (IST)		
5:30 pm – 5:35 pm IST	Welcome address	Apurva Chaturvedi, Senior Regional Clean Energy Specialist, Indo Pacific Office, USAID/India
5:35 pm – 5:40 pm IST	Keynote address	Shashank Misra, Joint Secretary (Distribution, Reform Utility), Ministry of Power
5:40 pm – 6:35 pm IST	Impacts of Electric Vehicles to Grid Infrastructure <ul style="list-style-type: none"> • Potential challenges for grid planning and operation posed by EV charging loads and interconnection • Methods, tools and data to address grid challenges 	Shibani Ghosh, Senior Research Engineer, National Renewable Energy Laboratory (NREL)



Time (IST)	Session details	Proposed Speaker
	<ul style="list-style-type: none"> EV Hosting capacity and interconnection requests 	
6:35 pm IST – 7:10 pm IST	Experience sharing by Utility on EV deployment and its impact on grid, infrastructure capacity, charge management etc	Pradeep Aggarwal, General Manager, BSES Rajdhani Power Ltd.
7:10 pm – 7:25 pm IST	Discussion: Question & Answer	
7:25 pm – 7:30 pm IST	Closing Remarks	SAREP/USAID
Session II: Thursday, March 21, 2024; 5:30pm – 7:30pm (IST)		
5:30 pm – 5:35 pm IST	Welcome address	USAID
5:35 pm – 5:40 pm IST	Keynote address	Atul Kumar Bali, Director (NPMU), National Smart Grid Mission, Ministry of Power, Gol
5:40 pm - 7:00 pm IST	Electric Vehicles – Modelling as grid loads <ul style="list-style-type: none"> Data and information needed to assess and plan for future load from EV charging Plausible scenarios for EV adoption patterns based on international EV market trends, national-level targets, and other goals, for near, medium, and long-term adoption EV modelling tools and their utilization 	Caley Johnson, Senior Transportation Market Analyst, National Renewable Energy Laboratory (NREL) Shibani Ghosh, Senior Research Engineer, National Renewable Energy Laboratory (NREL)
7:00 pm – 7:25 pm IST	Discussion: Question & Answer	
7:25 pm – 7:30 pm IST	Closing Remarks	SAREP
Session III: Thursday, April 4, 2024; 5:30pm – 7:30pm (IST)		
5:30 pm – 5:35 pm IST	Welcome address	USAID
5:35 pm – 5:40 pm IST	Keynote address	Rakesh Kumar, MD, Assam Power Distribution Company Ltd



Time (IST)	Session details	Proposed Speaker
5:40 pm – 6:35 pm IST	<p>Tariff Design for EV users</p> <ul style="list-style-type: none"> • Issues and trends in rate design and review of non-EV load management techniques such as time-of-use rates and demand response activities • Consumer and technology categorization for tariff treatment of market sectors • Mapping EV program objectives towards an EV rate design roadmap for utilities 	Dr. Naim Darghouth, Research Scientist, Energy Markets and Policy Department, Lawrence Berkeley National Laboratory
6:35 pm IST – 7:10 pm IST	<p>Tariff designing from an Indian Context</p> <ul style="list-style-type: none"> • Indian EV tariff landscape • Parameters to be considered in designing the tariff • Approach on tariff designing/how tariffs should be designed • Case Studies 	Ajay Rawat, Utility Lead - USAID South Asia Regional Energy Partnership (SAREP) Program
7:10 pm – 7:25 pm IST	<ul style="list-style-type: none"> • Discussion: Question & Answer 	
7:25 pm – 7:30 pm IST	Closing Remarks	SAREP

*To be confirmed

SPOC(s) for the event:

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