ENRich 2019

ENR and the evolving autonomus connected electric and shared (ACES) economy

06 November

About ENRich 2019

Climate and the world of energy are intricately interlinked. At the turn of the century global economic growth and the need for energy related resources were growing apace. That relation is now significantly altered. While, global GDP is anticipated to double, energy demand is likely to grow only by 30 percent between now and 2040. However, this is not good enough. The world is 1°C hotter than it was about a hundred years ago[1], and local impacts are even more accentuated.

Economies have started transitioning their energy sector to manage the climate imperative. Indian energy sector has also started the transformation. Renewable energy is gaining share in the energy basket, and over time, it will displace carbon heavy alternatives. The economy is moving towards electrification across board. Industries dependent on traditional energy and resources economies need to transition.

We need to navigate effectively for a better future. The new paradigm in energy and natural resources presents opportunities for greater inclusion, employment, economic efficiency, competitiveness and such other. It can also help unleash a new wave of digital revolution because energy infrastructure of the future can become the new internet.

Along with these opportunities, there could be adversities emerging from the energy transition. Energy infrastructure has substantial long-term capital lock-ins, thus timing of new investments is increasingly becoming tricky as are the efforts in financing the high cost high gestation capital assets.

ENRich 2019, the tenth edition of our flagship Energy and Natural Resources (ENR) Conclave, will delve into these issues as it deliberates around the core theme of **Navigating Energy Transition**. The Conclave will deal with various aspects of this transition including on a socially inclusive course to this transition, on technology, investments, manufacturing and deployment, demand side efficiency and promoting the circular economy, resources for shared mobility and energy equity. In a situation that is beset with issues around utility sustainability, cost recovery and return on investments, we will deliberate through its various sessions on how these aspects can be coherently stitched together. The goal would be to evolve a robust landscape where citizens and investors in the energy economy can help evolve a benign energy future that leaves the world for our future generation in as good a place as that the past generations enjoyed.

ENRich 2019 themes

- A sustainable agenda for India
- Investing amidst the energy transitions
- Circular economy in energy and resources
- ENR and the evolving Autonomous Connected Electric and Shared (ACES) Economy

The discussions in ENRich 2019 will be captured through a post-event brief for policy makers and sector professionals.

[1] Data in this paragraph abstracted from The Economist, September 20, 2019

Session context

Over the last year, the move to electric mobility has got stronger. The Government has reiterated its stance on this sector and launched the FAME-II scheme with a INR 10,000 crores outlay over 3 years. Under the FAME-II scheme, the Government has already sanctioned 5,595 e-buses and released an EOI inviting proposals to install charging stations across the country. Further, the GST on EVs has been reduced to 5% and income tax concessions have been introduced for loans on EVs. The Government has also introduced the Phased Manufacturing Plan (PMP) to support "Make in India". Further, the Government is coming up with an important program to support battery manufacturing under Niti Aayog. There appears to be a strong intent to support this sector with good incentives.

On the private side, we have seen actions by a number of players. Several OEMs have announced or have already launched new EV models in India. A number of cab operators such as Lithium, Meru, Blu Smart and Ola are adding more EVs in their fleet. Several companies such as Tata Power, Indus Towers, Vakrangee and Fortum have announced plans to enter into the EV charging business.

On the shared mobility front, the country has made significant progress and the millennial shift towards this form of transport is one mega trend affecting the auto sector.

The geopolitics of resource security is already beginning to play out as resources such as Lithium, Manganese and Cobalt are concentrated in a few countries. Efforts to gain access to these resources and control the supply chains are already being seen.

At ENRich, we will debate on how the country can prepare itself for this transition, how incumbent players should respond, how do we ensure resource security for this sector and create an enabling environment for start-ups, innovation and infrastructure investment.

- In the last one year, has the movement to E-Mobility become firmer? In what way?
- What innovations are we seeing in business models and start up activity?
- Do we see alternate technologies such as hydrogen coming up strongly in this space?
- Can India develop a competitive battery manufacturing ecosystem? How?
- How do we address the long term materials needs of this sector? Particularly, lithium and cobalt.

FAME-II Scheme Outlay

Particulars	Amount (INR crores)
Demand Incentives	**8,596**
2-wheelers (Target: 1 million)	2,000
3-wheelers (Target: 0.5 million)	2,500
4-wheelers (Target: 35,000)	525
4-wheeler hybrid (Target: 20,000)	26
Electric buses (Target: 7090)	3,545
Charging Infrastructure	**1,000**
Administrative expenditure	**38**
Phase-I committed expenditure	**366**
Total	**10,000**

Source: Notification of FAME-II scheme dated 8 March 2019

Global resource concentration

Critical Material	Top Countries (in % share)	
	Reserves	Refining
Lithium	Chile (57%) Australia (19%)	China[1] (44%)
Manganese	South Africa (29%) Ukraine (19%)	China[2] (64%) USA[2] (14%)
Nickel	Indonesia (24%) Australia (21%)	China (33%) Russia (12%)
Cobalt	Congo (50%) Australia (17%)	China (50%) Finland (10%)

1 – Based on actual 2015 refining and assuming global refining capacity is equal to production of Lithium
Source: Lithium 101, Deutsche Bank Research, 9 May 2016
2 – For Electrolytic Manganese Dioxide (EMD) only. EMD is used majorly in batteries.
Source: Electrolytic manganese dioxide (EMD): a perspective on worldwide production, reserves and its role in electrochemistry, Avijit Biswal,Bankim Chandra Tripathy, Kali Sanjay, Tondepu Subbaiah and Manickam Minakshi, RSC Adv., 2015, 5, 58255, DOI: 10.1039/c5ra05892a

Featured Speakers

B. N. Reddy
Joint Secretary (IC), Ministry of Petroleum & Natural Gas

Indian Foreign Services Officer with deep experience of resource diplomacy. Previously was the High Commissioner of India to Nigeria and has worked with Indian Missions at Indonesia, New York, Malaysia and Geneva

Atul Arya
Head Energy Systems Division, Panasonic India

Energy storage and charging infrastructure solutions expert with more than two and half decades of experience; expanded Panasonic's footprint in South Asia and China

Dr. Rahul Walawalkar
President, IESA and Chair, Global Energy Storage Alliance

Internationally known expert in energy storage, renewables, demand response and smart grid technologies. Was an expert evaluator for US Department of Energy for smart grid and energy storage demonstration projects

Naveen Munjal
Managing Director, Hero Electric Vehicles Pvt Ltd

Has led the Hero Group's foray into the Electric Vehicle segment. Hero Electric is a leading EV company in India. He is also the President of the Society of Manufacturers of Electric Vehicles (SMEV)

Santosh Kamath-Moderator
Partner and Lead, Alternate Energies, KPMG in India

Energy and infrastructure expert advising clients on strategy formulation, reforms and restructuring and capacity building for more than 25 years

Session timing:
1530 - 1630 Hrs
on
6th November 2019

KPMG in India contacts

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