



ENRich 2018

Energy and natural resources in new age mobility

11 December 2018

Hyatt Regency,
Bhikaji Cama Place
New Delhi

About ENRich

The ninth edition of ENRich, KPMG in India's flagship event for the Energy and Natural Resources (ENR) sector, is scheduled to be held on Tuesday, 11 December 2018 at Hyatt Regency, Bhikaji Cama Place, Ring Road, New Delhi, India. The theme of the conclave is '**New partnerships for new energy**'.

Shri Dharmendra Pradhan, Minister of Petroleum and Natural Gas; and Minister of Skill Development and Entrepreneurship and **General (Retd.) V. K. Singh**, Minister of State in the Ministry of External Affairs have consented to grace the occasion.

The energy sector in India is witnessing massive disruption due to alternative sources of energy, the geo political scenario and technological advancements. In the light of these developments, this year, the discussions will focus on the following themes:

- Role of energy in India's inclusive growth
- Geopolitics, energy & consumers
- Energy transitions, technology and innovation
- India's energy security and sovereignty
- Strategies for decarbonising India's energy sector
- Digital transformation in the ENR sector
- Energy and natural resources in new age mobility
- Forging new partnerships for new energy.

Like previous editions, ENRich 2018 is set to have interactive discussions with CXOs, policy makers, regulators, government utilities, private players, investors and sector experts.

We look forward to your presence at ENRich 2018.

Highlights from last year's ENRich conclave are available at <https://home.kpmg.com/in/en/home/events/2017/11/enrich-2017.html>



Sessions | ENRich 2018

Geopolitics, energy
& consumers

Role of energy in
India's inclusive
growth agenda

Towards energy and
resources security
and sovereignty

Decarbonising
energy for
sustainability

De-stressing the
Indian Power
Sector

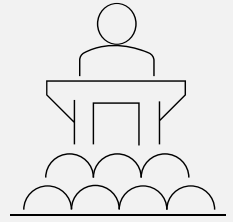
ENR: Digital and
analytics revolution
in the making

Energy and natural
resources in new
age mobility



New partnerships for
new energy

Featured speakers



Plenary 2: Energy and natural resources in new age mobility
(Moderated by CNBC – to be telecast on CNBC)



Anil Srivastava

Advisor, NITI Aayog

Three decades of working experience with Government in India; previously served as Chairman & Managing Director, Pawan Hans Ltd.



Mahesh Babu

CEO, Mahindra Electric

Deep experience with Mahindra & Mahindra working across design and development of engine and vehicle platforms



Naveen Munjal

CEO, Hero Eco

Held various positions across Hero Exports, Hero Corporate Services and Hero Cycles; also serving as President at Society of Manufacturers of Electric Vehicles



Saurabh Kumar

Managing Director, EESL

Previously worked with Bureau of Energy Efficiency, Ministry of Power, Indian Revenue Service, Ministry of Finance, etc.



Ted Surette

Global Head of Power & Utilities, KPMG in Australia

ENR specialist, with expertise in technology, energy transition, and business transformation



Santosh Kamath

Partner and Lead, Alternate Energies, KPMG in India

Specialist in alternate energy; wide experience across energy and infrastructure sectors and management consulting services

Moderator

Session context

India has committed itself to moving to a path of electrification of transport in line with the global megatrend. Electric Vehicles (EVs) are seen as a key element of this strategy. Our rising oil import bill at USD 87 bn last year (*Source: Petroleum Planning and Analysis Cell*), and worrying pollution levels in our cities are making the case for electrification stronger, apart from our climate change commitments.

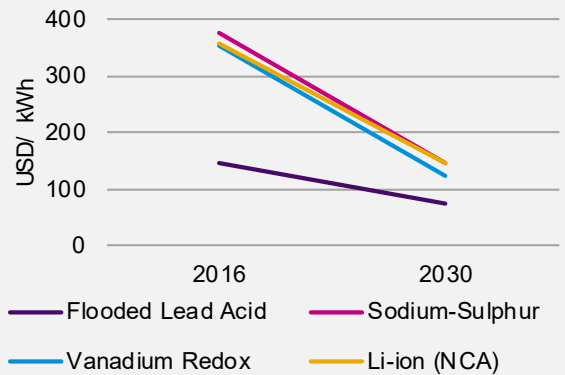
While the case for moving to electric is not debated, there is lack of consensus on the pathway that we should adopt. There is debate on how much we should accelerate on the path to electric. Should policy come in strongly to incentivise the transition? Or should we wait for technology to progress further? Will the auto industry be able to cope with an accelerated transition plan? These are the questions before us.

The other question is the manufacturing supply chain for batteries, a key cost component of EVs. With nearly 50 per cent of the cost being contributed by batteries, it will be a key area to develop focus and manufacturing competitiveness. How should we go about developing this ecosystem? How do we bring in R&D focus here? What should be our strategy to acquire or develop the mineral resources required for this segment? These are important questions before policy makers.

There are important questions on charging infrastructure creation. This is a classic chicken-and-egg problem. While some positive steps have been taken such as delicensing the charging service, questions around business models and attracting investors remains. How should we go about addressing this?

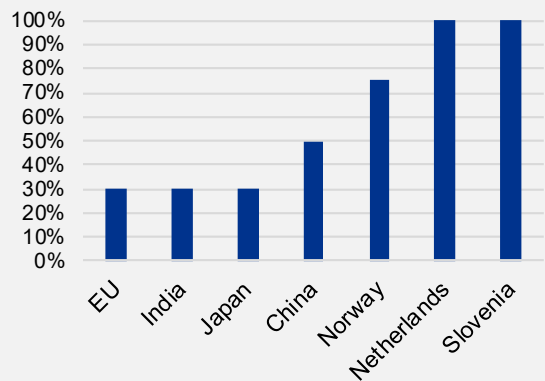
Finally, are there alternatives that could complement e-mobility? The session will also touch upon other new-age options for mobility including bioenergy and hydrogen. None of these are standalone choices; they have a bearing on the overall electrification, fuel and transport strategies. At ENRich 2018 we will assess the imperatives, nuances and linkages.

Battery storage cost reduction potential



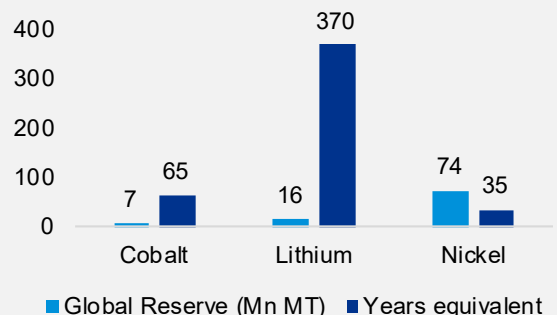
Source: *Electricity Storage and Renewables: Costs and Markets to 2030, October 2017*

EV share/sales by 2030



Source: *Global EV Outlook 2018, International Energy Agency*

Key mineral reserves and years equivalence in terms of 2017 production (for Li-Ion battery production)



Source: *US Geological Survey, Mineral Commodities Summaries 2018*

Indicative issues for discussion

What kind of targets should India set for the electric transition?

Is a stronger and firmer policy measure needed to meet the ambition (e.g. China introduced mandates as well as incentives)?

How can we prioritise different segments for this transition?

How can India establish competitive advantages in battery manufacturing and storage technologies through the value chain/ecosystem?

How do we address the long term materials needs of this sector? Particularly, lithium and cobalt.

How should we promote creation of charging infrastructure? What regulatory mechanisms and business models can make this happen?

What beyond e-vehicles? Do Hydrogen and fuel cells hold strong near to mid term prospects for India?

What role should partnerships play in the mobility and storage initiatives? How?



Tuesday **11**
December
15:30 hours

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