News Analysis (06 May, 2019)

FAME II

Why in news?

- Electric and hybrid vehicle (xEVs) manufacturers will have to indigenise a significant portion of components to avail benefits under a revised set of rules of the phase 2 of the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles, or FAME 2 scheme.
- In a first, detailed localization draft guidelines have been issued by the Department of Heavy Industry (DHI) putting out a list of key components for xEV manufacturers to localise with respective deadlines to avail the scheme across all approved vehicle categories.

Background

Government of India notified FAME India Scheme [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India] for implementation with effect from 1st April 2015, with the **objective to support hybrid/electric vehicles market development and Manufacturing eco-system.**

All about FAME

Objective

The FAME India Scheme is aimed at incentivising all vehicle segments i.e. 2 Wheeler, 3 Wheeler Auto, Passenger 4 Wheeler Vehicle, Light Commercial Vehicles and Buses. The scheme covers Hybrid & Electric technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles.

- **Monitoring Authority : Department of Heavy Industries**

- Fame India Scheme has four focus Areas.
    - Technology development
    - Demand Creation
    - Pilot Projects
    - Charging Infrastructure
- **Target:** National Electric Mobility Mission Plan (NEMMP) has set a huge target to deploy 48 lakh 2W EVs and 15 lakh 4W EVs by 2020

Analysis of focus areas

Technology development: There are two types of technology related with FAME : Battery Electric Vehicles (BEVs) and Hybrid Electric Vehicles (HEVs)

Battery Electric Vehicles (BEVs)

- India has a scarcity of lithium and will have to rely on expensive imports to sustain a growing BEV industry as the lithium is the best battery technology and delivers high energy and high power.
- Current battery technology is not mature enough to allow BEVs to compete with fossil fuel-based vehicles. As the energy efficiency capacity of BEVs is 100 times less than petrol and diesel vehicle, it provides low range per charge.
- Another technical deficiency of BEVs is that their speed and acceleration is lower than conventional fuel-based vehicles because of the low power capacity of batteries.

Hybrid Electric Vehicles (HEVs)

An HEV has a conventional internal combustion engine propulsion system plus an electric propulsion system consisting of a battery and a motor. This makes HEVs heavy and expensive. Therefore as per the current technology it can only be used in light commercial vehicle.

Steps Under FAME for technological development

- Under the FAME-India scheme, a nodal body, the DHI-DST Inter-Ministerial Technology Advisory Group (IM-TAG) on Electric Mobility has been set up.
- A few long-term projects are already underway under the auto-cess funded R&D programme.
- A collaborative approach between the industry and academia is envisaged, which would include government-funded as well as PPP projects.

Demand Creation

Incentive, in the form of discount, are provided under FAME. The discount amount is

about one-third of the difference between the price of an EV and a comparable petrol vehicle.

Pilot Projects

- The phase 1 of FAME PROVIDED incentive to private vehicles.
- The phase 2 of FAME will provide incentive for public transport in 10 cities**.** The outlay of ₹10,000 crore has been made for three years till 2022 for FAME 2 scheme. The centre has sanctioned ₹8,596 crore for incentives, of which ₹1,000 crore has been earmarked for setting up charging stations for electric vehicles in India. The government will offer incentives for electric buses, three-wheelers and four-wheelers to be used for commercial purposes. Plug-in hybrid vehicles and those with a sizeable lithium-ion battery and electric motor will also be included in the scheme and fiscal support offered depending on the size of the battery.

Steps taken by Government

- The government has to set up additional power generation infrastructure in order to make EVs more attractive.

- Upcoming smart grids in India can play a significant role in improving the charging infrastructure. Smart grids can help in optimising electricity needs at peaking demand hours for utility purpose and for BEV charging. For example **Bosch** has set up one such infrastructure in Germany with Mobile connectivity to provide information.

Environmental Impact of Dams

Why in news?

A 27-year-old hermit in Haridwar, Swami Atmabodhanand, has broken his 194-day fast in protest against sand mining and the upcoming dams on key rivers that feed the Ganga.

What is the environmental impact of Dams?

- **Habitat fragmentation:** Unless specifically engineered to allow fish to pass through them, **dams present a barrier** to fish that need to migrate to spawn and reproduce downstream and upstream along a river. This not only impacts the populations of the fish themselves, but it can negatively impact other species in the food chain that either eat that fish or are preyed upon by that fish.
- **Flooding and the destruction of surrounding habitat:** Dammed rivers **create a reservoir upstream** from the dam, which spills out into the surrounding

environments and floods ecosystems and habitats that once existed there. Such flooding can kill or displace many different organisms, including plants, wildlife, and humans.

- **Greenhouse gases:** The flooding of surrounding habitat around dams kills trees and other plant life that then decomposes and releases large amounts of **carbon** into the atmosphere. Because the river is no longer flowing freely, the water becomes stagnant and the bottom of the reservoir becomes becomes depleted of oxygen. This lack of oxygen creates a situation where **methane** (a very potent greenhouse gas) is produced from the decomposition of the plant materials at the bottom of the reservoir that eventually gets released into the atmosphere, contributing to global climate change.
- **Sediment builds up behind the dam:** Because a dammed river no longer flows freely, the sediment that would have otherwise been deposited naturally downstream begins to build up behind the dam, forming new riverbanks, river deltas, alluvial fans, braided rivers, oxbow lakes, levees and coastal shores. These changes in sedimentation can lead to dramatic alterations in plant life and animal life and how they are distributed.
- **Downstream sediment erosion:** Due to the restrictions in the sediment flow above a dam, the lack of sediment that would have once flowed downstream ultimately leads to a **deficiency in sediment load**, and therefore, leads to an **increase in downstream erosion.** This lack of sediment load causes the riverbed to deepen and narrow over time, a compromised water table, the homogenization of the river's flow, reduced wildlife support, and a reduction in sediment that reaches coasts and deltas.
- **Negative impacts on local fish populations:** Typically, local fish species **will not be adapted to the new environment** that is present after a dam is built and do not survive, leading to the extirpation of local populations. Many factors impact their survival, including the blockage of migration routes, a disconnection from the river's flood plain, changes in a river's flow, changes in temperature, turbidity, dissolved oxygen, and changes in local plant life.
    - Organic materials from within and outside the river that would normally wash downstream get built up behind dams and start to consume a large amount of oxygen as they decompose. In some cases this triggers algae blooms which, in turn, create oxygen-starved "**dead zones**" incapable of supporting river life of any kind.
    - Also, **water temperatures in dam reservoirs can differ** greatly between the surface and depths, further complicating survival for marine life evolved to handle natural temperature cycling. And when dam operators release oxygen-deprived water with unnatural temperatures into the river below, they harm downstream environments as well.

Production of methyl-mercury: The stagnant water in reservoirs creates a situation where the decomposition of organic matter from decaying plants can transform

inorganic mercury into methy-mercury. Unfortunately, methyl-mercury tends to bio-accumalate and cause toxic effects in humans and wildlife that eat the fish in reservoirs.

Class Action Lawsuits

The government is readying a scheme to provide financial assistance to **minority investors** filing **class action lawsuits** under the companies law.

- Under **Section 245 of the Companies Act**, investors can file a class action suit in case they feel the management or conduct of the affairs of a company is prejudicial to their interests.
- The concept of class action suit provides an option for investors to seek remedy as a group, is well known in western countries. The lawsuit involves a plaintiff suing a defendant or multiple defendants on behalf of a group or a class.

Advantages

- It is a way to further bolster measures to protect the interests of investors, and encourage investors to resort to class action suits.
- It will provide financial assistance to minority investors to file class action by using the **IEPF (Investor Education and Protection Fund).**
    - IEPF is managed by the IEPF Authority, which comes under the Ministry of corporate affairs.
    - IEPF is for promotion of investors awareness and protection of the interests of investors.

Significance

- The push for class action suits also assumes significance against the backdrop of various instances of investors getting duped by illegal money pooling schemes as well as being impacted by corporate governance issues and fraudulent practices at some companies.
- Minority investors are not well equipped to pursue a class action. There is provision for disgorgement also. Class action suit is an important way to empower minority shareholders who are the worst sufferers.

    Auditors, credit rating agencies, everybody would be liable to a class action. Among others, if statutory auditors have been callous and negligent, endorsing falsified statements, the investors can certainly proceed against them with a class action.

IEPF Authority

- It is formed for administration of Investor Education and Protection Fund Government
- India has on 7th September 2016 established Investor Education and Protection Fund Authority under the provisions of section 125 of the Companies Act, 2013.
- The Authority is entrusted with the responsibility of administration of the Investor Education Protection Fund (IEPF), make refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors and to promote awareness among investors.

The IEPF is to be utilized for

- The refund in respect of unclaimed dividends, matured deposits, matured debentures, the application money due for refund and interest.
- Promotion of investors' education, awareness and protection
- Distribution of any disgorged amount among eligible and identifiable applicants for shares or debentures, shareholders, debenture-holders or depositors who have suffered losses due to wrong actions by any person, in accordance with the orders made by the Court.

AMFI guidelines

The **Association of Mutual Funds in India (AMFI)** has recently issued guidelines on how fund managers should write down debt and handle below investment grade paper.

- AMFI has suggested lower provisioning for secured debt of infrastructure and real estate firms, hotels, hospitals and the contentious so-called loan against share or LAS paper.
- It has requested the asset management companies (AMCs) to be proactive in applying the standard hair-cut matrix on sub-standard investment-grade debt securities without waiting for rating agencies to downgrade them.
    - According to SEBI guidelines, any security which has a **rating below BBB**- is considered to be below investment grade.
    - **Haircut** is mutual funds writing off the principal amount and the interest in case of a default.
- So far, every asset management company (AMC) and fund manager used to write down or decide on haircut on its own. These guidelines will bring about uniformity in the valuation of distressed securities across the industry.
- AMCs fear that applying the standard haircut matrix would lead to heavy redemptions, which can potentially bring down the net asset value of their fund drastically.
- These guidelines have come after a recent SEBI circular. The circular asked AMFI and the valuation agencies – Crisil and Icra Management Consulting Services Limited

(IMaCS) -- to develop a valuation methodology for such investment grade paper.

AMFI: AMFI,the association of SEBI registered mutual funds in India, was incorporated on August 22, 1995, as a non-profit organisation. It is dedicated to developing the Indian Mutual Fund Industry on professional, healthy and ethical lines and to enhance and maintain standards in all areas with a view to protecting and promoting the interests of mutual funds and their unit holders.

Asset Management Company (AMC): An asset management company (AMC) is a firm that invests pooled funds from clients, putting the capital to work through different investments including stocks, bonds, real estate, master limited partnerships, and more. Those that offer public mutual funds or exchange-traded funds (ETFs) are also known as investment companies or mutual fund companies.

Factors preventing Financial Inclusion

Recently, **Business Correspondents (BCs) and bankers have flagged some issues that are blocking financial inclusion in the country.**

Key points

- Aadhar enabled payment system **(AePS) device subsidy, being offered by NABARD is not being availed by the banks** and BCs cannot afford the same. This restricts access to Direct Benefit Transfer (DBT) money to the citizens.
- Jan Dhan accounts and accounts in rural areas are not being identified by the common IFSC code of centralised Core Banking System. Hence, any service to these accounts are violative of government intent and invite GST charges.
- **Fee proposed by the government is not being paid to BC agents,** thus making the work unviable for them.

Who are Business Correspondents?

- Business Correspondents (BC), authorized by the Reserve Bank of India, **are retail agents engaged by banks for providing banking services** at locations – **mostly remote areas** — other than a bank branch or ATM.
- BCs enable a bank to provide its limited range of banking services at low cost, thus promoting financial inclusion.

AePS and DBT:

- Aadhaar enabled Payment System (AePS) is a bank-led model which allows **online interoperable financial inclusion transaction** at PoS (MicroATM) through the

Business correspondent of a bank using the **Aadhaar authentication.**
- The only inputs required for a customer to do a transaction under AePS are:
  - IIN (Identifying the Bank to which the customer is associated)
  - Aadhaar Number
  - Fingerprint captured during their enrollment
- The **Direct Benefits Transfer (DBT)** simply involves transferring the subsidy amount and other benefits (called transfers) directly to the beneficiaries' bank accounts instead of providing it through government offices.
- AePS helps targeted beneficiaries under DBT in receiving the subsidy amount.

NOTE: In September 2018, the Supreme Court set aside mandatory linking of Aadhaar with bank accounts, but allowed DBT-related Aadhar use.

Way Forward

- **BCs need to be properly incentivized and monitored by the banks.** They should be provided with all such facilities and devices that they need.
- **The government needs to make small savings affordable for banks.**
- It is the need of the hour to **educate the people,** especially the target section about the available benefits like the one associated with RuPay cards.

Important Facts For Prelims (6th May 2019)

National Crisis Management Committee (NCMC) reviews relief measures

The National Crisis Management Committee (NCMC) reviewed relief measures in the cyclone FANI affected areas of Odisha, West Bengal and Andhra Pradesh with the States and Central Ministries/Agencies concerned.

About NCMC

- The Government of India, for effective implementation of relief measures in the wake of natural calamities, sets up a **Standing National Crisis Management Committee** with Cabinet Secretary as Chairman and Secretaries of all the concerned Ministries /Departments as well as other organizations, to meet the exigencies of such crisis. The committee has previously met during Cyclone Ockhi, Kerala floods etc.
- The NCMC gives direction to the Crisis Management Group as deemed necessary.

Crisis Management Group (CMG): The group deals with matters relating to relief in the wake of major natural calamities. The group consists of Relief Commissioner (Chairman) and other nodal officers from various concerned Ministries. Its functions are to review:

- contingency plans formulated by various Ministries, Departments and Organizations in their respective sectors.
- measures required for dealing with a natural disaster.
- coordinate the activities of the Central Ministries and the State Governments in relation to disaster preparedness and relief.

India-UK Naval Cooperation

India and the United Kingdom are in talks to build a new state-of-the-art aircraft carrier along the lines of UK's HMS Queen Elizabeth as a part of India's 'Make in India' programme.

- Indian Navy intends to buy detailed plan of the HMS Queen Elizabeth, a 65,000-tonne warship, and build a new version called INS Vishal in 2022.
- The design for UK aircraft carriers is owned by the British and French aerospace giants BAE and Thales.
- The design would be modified to meet Indian Navy and local industry requirements.
- For India, a new naval carrier would serve alongside INS Vikramaditya — bought from Russia in 2004 — and the currently under-construction INS Vikrant which could strengthen 'blue water' capability of Indian navy.

Note: A 'blue-water navy' is a maritime force capable of operating in the deep waters of the open oceans. The term is more colloquial than doctrinal and most sea-going states differ on its specifics. Broadly, however, most navies agree that a blue-water navy is capable of prolonged and sustained operations across the open oceans, and has a capacity to project "credible power" in the distant seas.

- The INS Vikramaditya, the Indian Navy's only in-service aircraft carrier, was a former Russian ship that was commissioned into service in 2013.
- Prior to the INS Vikramaditya, both of the Indian Navy's previous aircraft carriers—the Vikrant and Viraat—were ships that were formerly in service with the Royal Navy of Britain.
- INS Viraat was decommissioned two years ago, to be converted into Maritime Museum.
- INS Vikrant, also known as Indigenous Aircraft Carrier 1 (IAC-1), is the India's first Indigenous Aircraft Carrier (currently being built at the Cochin Shipyard Limited) which will be delivered to the Indian Navy by 2021.

Scientists Complete Genetic Sequencing of Chickpea

- Recently, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and other research institutions across the world successfully completed the sequencing of 429 chickpea lines from 45 countries.
- In 2011, scientists successfully sequenced the genome or most of the genetic make-up of the arhar (pigeon pea plant).
- In the context of the growing global population and threats posed by climate change there is a need to generate new varieties of chickpea (an important crop with high nutrient value) with better traits including heat, drought, pests and disease resistance, higher yield and productivity.
- The research helps understand domestication and post-domestication divergence of chickpea.
- It will enable breeders in developing improved climate-change ready varieties that will contribute significantly to increase in productivity and sustainability of agricultural development in developing countries.

What is Genome Sequencing?

- Each plant cell contains the genome: a linear string of DNA base pairs (bp), which ultimately dictates that a corn seed will grow to become a corn plant, for instance, and not a banana or soybean plant.
- Determining the order of DNA bases, or sequencing, allows researchers to decode the first layer of genome features such as protein-coding genes, repetitive areas called “repeats,” and the elements that regulate how genes are expressed in cells. Together, all of these features provide the genetic instructions that make each plant species unique.

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

- ICRISAT is an international organization which conducts agricultural research for rural development.
- It was founded in 1972 by a consortium of organisations. Its charter was signed by the FAO and the UNDP.
- It is headquartered in Telangana, India and with several regional centers and research stations in other countries.