

## Meeting Green Targets through Biomass

### What is the issue?

Biomass can be an effective means to raise the green footprint but there are some issues that need to be resolved.

### Why Biomass?

- Green energy is not only about solar and wind, but about biomass too.
- Biomass today is an important fuel in many countries, especially for cooking and heating in developing countries
- Over the years, its use as fuel for transportation and electricity generation has been increasing.
- India's focus on this segment of green energy comes from the statements made by the Prime Minister at the recently held COP26 summit "India will reach its non-fossil energy capacity to 500 GW by 2030."

### What does the government policy say?

- **Old policy (2017)**- Earlier, the government had issued a policy on biomass utilization for power generation through co-firing in coal-based power plants.
- The government had advised coal-based thermal power plants, (except ball and tube mill, power generation) to endeavor to use a 5-10% blend of biomass pellets.
- Primarily the pellets are made of agro residue along with coal after assessing the technical feasibility and safety aspect.
- **Modified policy (2021)** - Earlier policy was revised because it was an advisory without any mandatory use of biomass.
- However the government now pushes for mandatory use of biomass co-firing.
- But concerns remain on successful implementation since it is a policy and not a regulation. Making it mandatory may not mean much.

### What does the revised policy recommend?

- Mandating all thermal power plants to use 5% blend of biomass pellets made, primarily, of agro residue along with coal with effect from one year of the date of issue of this guideline.
- This will increase to 7% (except for those having Ball & Tube mill the use of biomass remain 5 percent) with effect from two years after the date of issue

of this order and thereafter.

- Minimum contract period for procurement of biomass pellets by generating utilities shall be for 7 years
- This helps in avoiding delays in awarding contracts to generating companies every year and also to build up a long-term supply chain.
- Provisions related to tariff determination and scheduling:
  - For projects set up under Section 62 of the Electricity Act 2003, the increase in cost due to co-firing of biomass pellets shall be passed through in Energy Charge Rate (ECR).
  - **Energy Charge** means a charge levied on the consumer based on the quantity of electricity
  - For projects set up under Section 63 of the Electricity Act 2003, the increase in ECR due to biomass co-firing can be claimed under Change in Law provisions.
  - Such additional impact on ECR shall not be considered in deciding Merit Order Despatch (MOD) of the power plant.
  - Obligated Entities such as Discoms can meet their Renewable Purchase Obligations (RPO) by buying such generation of co-firing.

### **What are the advantages of utilizing biomass for power generation?**

- **Curtail Stubble burning** - The Power Ministry has already set up the National Mission on the use of Biomass in coal-based thermal power plants, to address the issue of stubble burning and to reduce carbon footprints of thermal power generation.
- Around 53,000 tonnes of biomass was utilized as green fuel in power plants so far.
- This is expected to curtail air pollution in northwest India as well as prevent loss of fertility of agricultural land and provide a sustainable income source for farmers, suppliers, and biomass fuel manufacturers.
- The current availability of biomass in India is estimated at 750 million tonne annually. The estimated surplus biomass availability is at about 230 million tonne annually covering agricultural residues.

### **What hinders its successful implementation?**

- It will be successful only if it finds full acceptance among the stakeholders, particularly power generation companies and distributors.
- **Price of biomass** - Procurement of biomass, as well as right price and quality, are the most critical aspect.
- State power generation companies will be able to manage the increase in cost due to biomass pellet co-firing by claiming under Change in Law provisions.

- For Independent power producers a clarity on the regulatory mechanism of pass-through for open capacity is needed.
- **Supply chain** - There is a need to establish a proper supply chain and ensure the adequacy of stock to achieve the 5% requirement
- The requirement increases to 7% from the second year.
- **Cash flow** -The Independent power producers (IPPs) are already under stress due to distribution utilities defaulting on payments. Due to this transition, IPPs will face an additional cash flow burden
- **Legal backup** - Electricity is de-licensed and the Union Power Ministry without the backing of any Act may not have the necessary means to enforce mandatory use of biomass.
- Only the Central Pollution Control Board or the Bureau of Energy Efficiency have power/supporting acts that could enable them to put a mandatory condition.

### **What needs to be done?**

- A mandatory condition in Energy Conservation Act amendment which the Power Ministry is planning for.
- The Ministry will need to issue a model agreement for the procurement of biomass and create a procurement portal.
- Till all the issues are resolved, the fear is that this effort also may end up being just another initiative of the government.

### **Reference**

1. <https://www.thehindubusinessline.com/opinion/meeting-green-targets-through-biomass/article37927318.ece>

