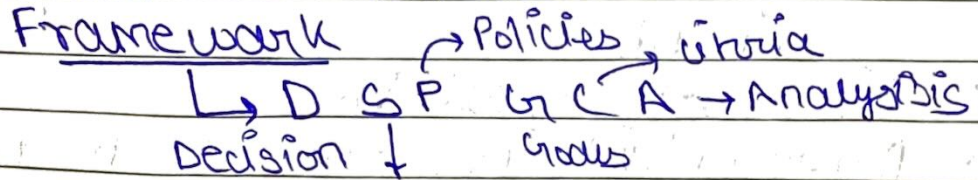


Policy

It is a principle or protocol to guide decisions and achieve rational outcomes



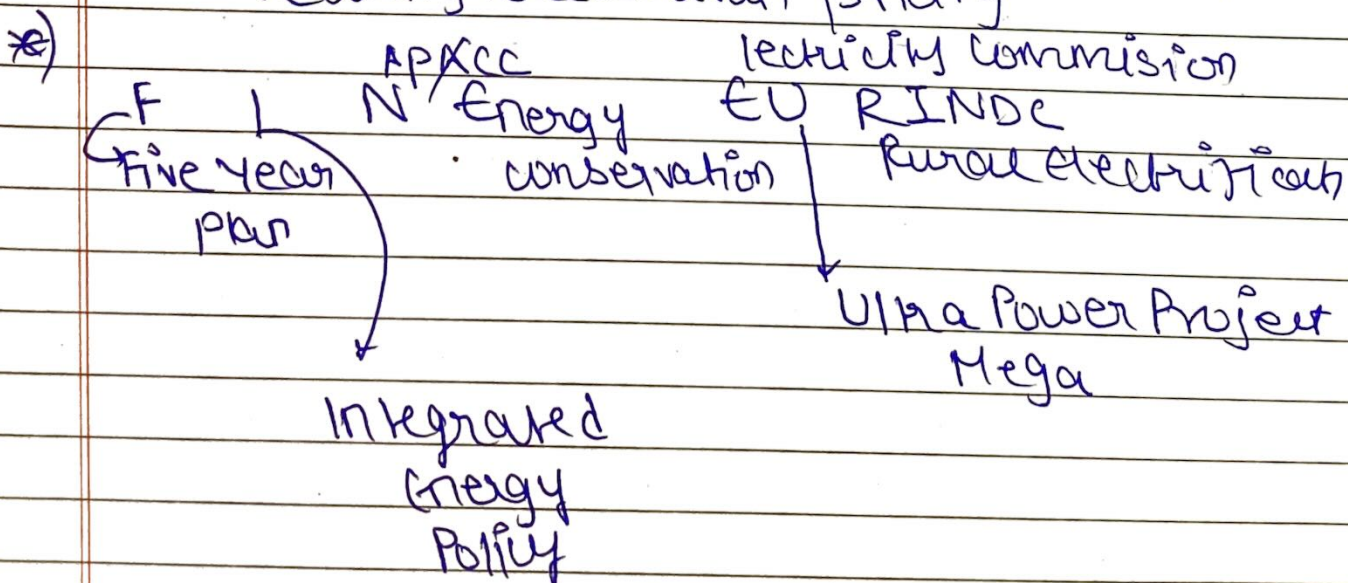
Stakeholders

Energy Goals Technology

- Increase Energy Access, Transition & Security
- Manage energy related market power & resources
- Reduce environmental impact.
- Implement Energy Policy.

India Documents

- Five Year Plan (1951-56) Twelfth (2012-17)
Thirteenth No, deference (2017-22)
- Integrated Energy Policy - Aug 2006 energy security, access availability, pricing



- Demand Side Management has been a major intervention in reducing energy demands
- It is apart of all states
- Defered high investments in generation & distribution

Agricultural

- 1) Overall power consumption reduction
- 2) Improving ground water extraction, reducing subsidy burden
- 3) Investment in power plants
- 4) Build awareness for energy efficient Pumpsels

Cash Flows

- ↳ initial investment as one or more installments
- ↳ savings arising from the investment

Other cash flows

↳ Capital costs

- ↳ design, planning, installation & commissioning
- ↳ one time costs

↳ Annual outflows

- ↳ annual saving from the budget
- ↳ include taxes, insurance, loss energy cost.

Factors to be considered



Taxes → marginal tax rate applied to five

↳ Asset depreciation

depreciation of plant assets over their life

Cash flow occur sporadically rather than annual

Sensitivity & Risk Analysis

Most of the cash flows are based on element of uncertainty

present day cash flows, such as capital cost, energy cost savings are estimated fairly accurately

↳ But these estimates actually

↳ sensitivity analysis is the assessment of risk

↳ Determines how sensitive is the project's feasibility to changes in input parameters

↳ Determines what factors are not working as predicted

Eg. Suppose saving cost $\rightarrow 10\%$
break even at 9%
high risk

↳ calculated using spreadsheets
↳ lead to improved project design

Micro factors

- \rightarrow operating expenses
- \rightarrow capital structure
- \rightarrow cost of debt

Macro factors

interest, tax rates, all standards, depreciation rules

Financial Options

- ↳ from central budget
- ↳ bank loan
- ↳ specific departmental/section budget
- ↳ stock market money
- ↳ ESCO

Energy Performance Contracting & Role of Energy Service Companies

ESCOs

Contract

Performance Contracting

1) Complete energy project service from assessment to design to construction & installation along with management & finance

1) Involves capitalization of all of the services & goods purchased & repayment out of energy savings.

→ an end user who is seeking to improve efficiency. contracts with ESCO.

- 1) Financing
- 2) Engineering
- 3) Training

