

## **ENERGY AFTER RIO: PROSPECTS AND CHALLENGES**

- **ENERGY AND MAJOR GLOBAL ISSUES** (Current Energy Patterns aggravate major global issues & alternative energy approaches are required to tackle these issues)
- **NEW TECHNOLOGICAL OPPORTUNITIES ON DEMAND & SUPPLY SIDES**



## **ENERGY AFTER RIO: PROSPECTS AND CHALLENGES**

- **IMPLICATIONS OF SUSTAINABLE ENERGY** (Global energy scenarios; Implications for Developing and energy-exporting countries; and general implications)
- **ENERGY IS AN INSTRUMENT OF SUSTAINABLE DEVELOPMENT**
- **MAKING IT HAPPEN**



## **ENERGY AND SOCIAL ISSUES**

- POVERTY
- GENDER DISPARITY
- POPULATION
- UNDERNUTRITION AND FOOD



## **ENERGY AND ENVIRONMENT**

- HEALTH
- ACIDIFICATION
- CLIMATE CHANGE
- LAND DEGRADATION



## **ENERGY AND THE ECONOMY**

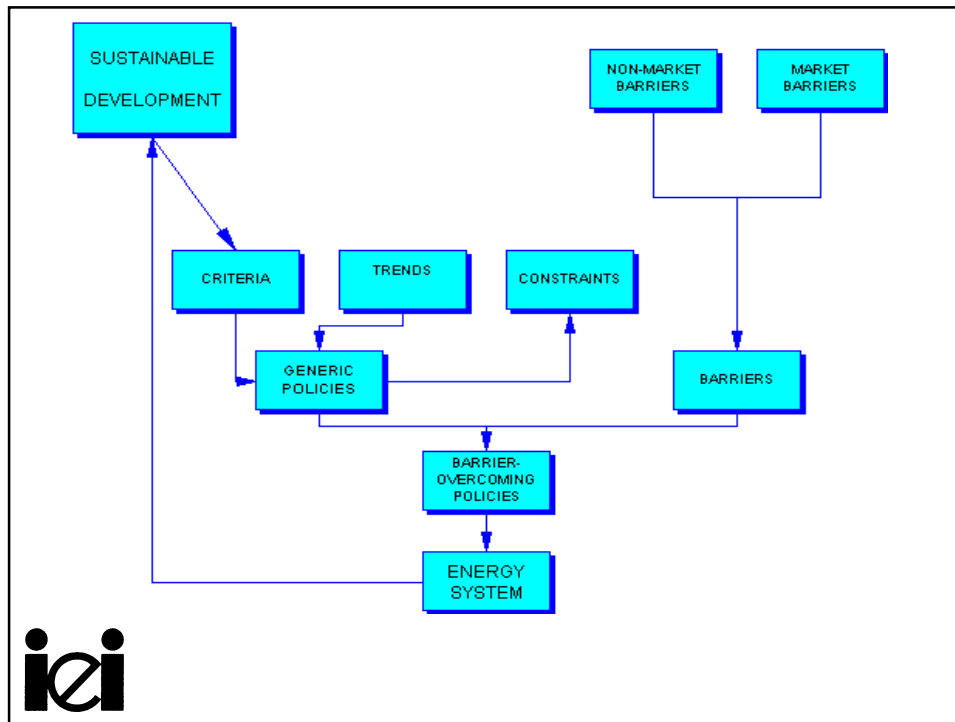
- INVESTMENT  
REQUIREMENTS
- FOREIGN EXCHANGE  
IMPACTS



## **ENERGY AND SECURITY**

- ENERGY AND NATIONAL  
SECURITY
- NUCLEAR ENERGY &  
NUCLEAR WEAPONS  
PROLIFERATION





## CRITERIA OF SUSTAINABLE DEVELOPMENT

- ECONOMIC EFFICIENCY
- EQUITY/ACCESS (PARTICULARLY FOR THE POOR, WOMEN & RURAL AREAS)
- EMPOWERMENT/SELF-RELIANCE
- ENVIRONMENTAL SOUNDNESS
- PEACE

## GLOBAL TRENDS

- GLOBALIZATION
- MARKETIZATION
- DEMOCRATIZATION (POPULAR PARTICIPATION IN DECISION-MAKING)
- CORPORATIZATION OF UTILITIES
- CHANGING EXTERNAL FUNDING (MAGNITUDE AND SOURCES)



## CONSTRAINTS

- DECLINING AVAILABILITY OF TRADITIONAL CAPITAL (INTERNALLY FROM GOVERNMENTS AND EXTERNALLY FROM ODA)
- CUT-BACKS IN GOVERNMENT SPENDING



## GENERIC POLICIES

- UNIVERSAL ACCESS TO ENERGY SERVICES (OBLIGATION TO SERVE)
- INDIGENOUS CAPACITY BUILDING
- FOCUS ON ENERGY SERVICES (NOT MERELY ENERGY CONSUMPTION)
- MIX OF CLEAN FOSSIL-FUEL TECHNOLOGIES, RENEWABLES & END-USE EFFICIENCY IMPROVEMENTS



## GENERIC POLICIES (CONTD)

- ESTABLISHMENT & MAINTENANCE OF A LEVEL PLAYING FIELD
- PROMOTION AND SAFEGUARDING OF COMPETITION
- KEY ROLE FOR PRIVATE SECTOR
- ROLES FOR ALL STAKE-HOLDERS
- POLICY INSTRUMENTS THAT ARE NO/LOW COST TO TREASURIES



## MARKET-BARRIERS

- SUBSIDIES TO CONVENTIONAL ENERGY
- PRICES DO NOT REFLECT NEGATIVE ENVIRONMENTAL IMPACTS
- IMPERFECT INFORMATION
- FIRST-COST SENSITIVITY
- SPLIT INCENTIVES
- INDIFFERENCE TO ENERGY COSTS



## NON-MARKET BARRIERS

- SUPPLY-BIASED PARADIGM
- INSTITUTIONAL OBSTACLES
- DECLINING R & D EXPENDITURES

