



Economic Commission for Europe

RENEWABLES IN ECE REGION
EE 21 Project Steering Committee
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Restructuring, Sustainable Energy
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DEFINITIONS & SCOPE

- Different definitions among agencies
 - EU: all non-fossil energy sources;
 - IEA: those derived from natural processes and replenished constantly
- Need to harmonize data collection
 - At national level
 - At international level



POLITICAL IMPETUS TO RES TODAY

Driving forces

- **Kyoto Protocol Commitments**
- **Johannesburg Implementation Plan**
- **EC Strategy & Action Plan on RES**
- **EU Directive 2001/77/EC**
- **Ministerial Conference on Environment for Europe (Kiev)**



POTENTIAL FOR RES IN ECE REGION

1. Great potential for:

- biomass- North America, RF, C+N E
- wind – North America, N+CE, coasts
- Solar ph- higher intensity below 50°

2. Limited potential for:

- Hydropower, in particular large scale
- Geothermal



MARKET SHARE OF RES IN ECE REGION

- RES represent 5% of TPES
- Biomass & hydro= 85% of RES-TRES
- RES-E = 15% of total electricity
- Main market RES: biomass, hydro, geothermal, wind and solar
- but
- Municipal + Industrial waste is also ↗



MARKET SHARE OF RES IN ECE REGION

- Between 1990-2003, market share of RES to TPES increased in the same pace than traditional energy sources;
- Annual increase of electricity from other than hydro: EU=9%; NA=0.4%;
ECE transition countries= around 0%;
- Conclusion: RES-E other than hydro are currently increasing in EU/WE only.



RES-E MARKET GROWTH

- RES-E Market is growing up faster since 1997, with an annual rate of:
 - wind power in EU-15 = 30-35%;
 - solar Ph in EU-15 = 20-25%;
 - solid biomass in EU-15 = 7-10%;
 - windpower installed: 33 GW in ECE; of which 26 GW in Europe.



COMPETITIVENESS AND COSTS

- RES are not competitive to others;
- but, costs continuously decrease thanks to technology performance
- on shore wind & biomass more competitive;
- trade barriers for biomass to be removed



POLICY SUPPORT TO RES-MARKET (1)

- Policy start with targets.
- EU average targets:
 - RES to increase from 6% to 12% by 2010 in TPES; and
 - RES-E to increase from 14% to 22%;
 - each EU member to set a RES-target consistent with this on CO2 reduction.

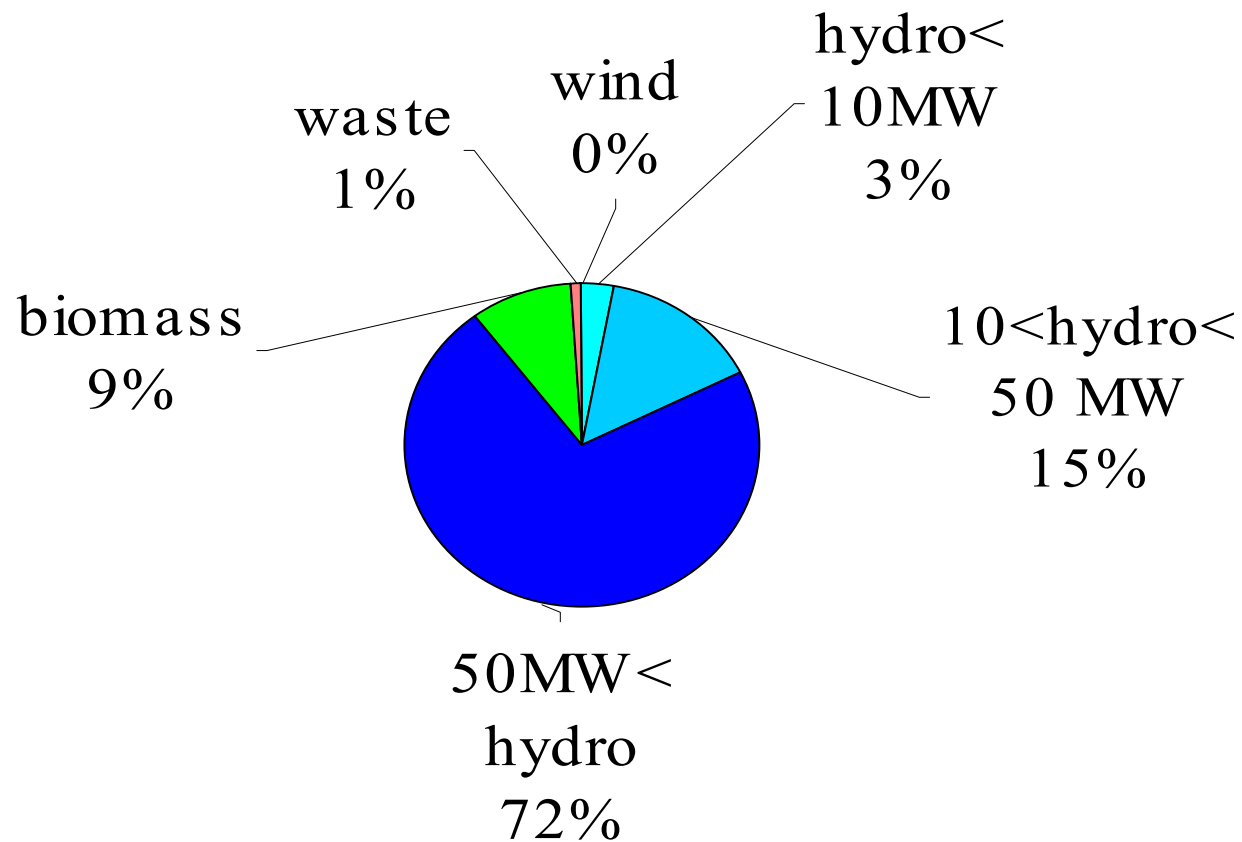


POLICY SUPPORT IN TRANSITION ECONOMIES

- **targets set in some ECE-TC;**
- **in most, policy existing but not enforced;**
- **lack of supportive schemes; no finance;**
- **energy prices are still low;**
- **large potential to reduce CO₂ through EE improvements and conservation measures**
- **RES seen rather as small local business than having environmental merits.**



RES-E capacities in 8-selected C+ E European Countries



POLICY SUPPORT TO RES-MARKET (2)

- Five types of policy instruments used:
 - tax exemption or reduction;
 - tax refunds;
 - investment aid;
 - direct price support schemes
 - green certificates
- 100 cases in Europe, 20-25 in biomass



POLICY SUPPORT

EU DIRECTIVE on RES-E

- The Directive: Legal Community Frame on Access for RES-E to the internal market;
- Objective: To promote an increase of RES share to electricity produced in internal market
- The Directive provides for conditions on:
 - how to set national targets and schemes;
 - how to set Guarantee of origin of electricity
 - grid system issues;





POLICY SUPPORT TO RES-MARKET (4)

- The Main Questions to policy making:
- Whether with current RES- policies the targets would be met?
- Supportive schemes? To all or to most competitive? and for * taking off* or for ever?
- Do countries need harmonized RES policy, in particular to off-grid renewables?
- How RES can benefit from Kyoto mechanisms?

IS THERE NICHE FOR ECE

- The extended Bureau Meeting (June, 2003) recommended to Secretariat to (1) organise a Round table; and (2) prepare TeR for discussion by CSE, in November 2003;
- The Committee had to decide whether it:
- Can further promote sustainable policies, without having RES component in its program
- And, if not, what ECE should do to avoid duplication with others ?



WHO IS DOING WHAT ON RES IN ECE REGION

- The following organisations are involved:
- EC, Brussels- PR; PI; RR+RI; M; PD; TA; DI
- OECD/IEA - PR; RR MMP DI
- UNDP/GEF - TA F
- UNIDO - DI
- UNESCO - T DI
- EBRD - F



WHO IS DOING WHAT ON RES IN ECE REGION (2)

- The others:
- UN Regional Commissions:
 - ESCAP, ESQWA and ECLAC have regular programmes on Renewables;
 - ECE and ECA have not
- Regional Initiatives (Type II Initiatives)
 - Mediterranean RES Programme (MedRE)
 - RES and EE Partnership (REEEP) – U.K.



TERMS OF REFERENCE (1)

- Having regard to (1) UNECE Declaration to CSD-9; and (2) Kiev Ministerial Conference Conclusions:
- The recommendation to CSE was:

to complete the Committee's Programme on Sustainable Energy by including RES component in it.



TERMS OF REFERENCE (2)

The Committee invited to decide the SCOPE:

1. Scope, in terms of RES inclusion:

- Major RES: small-hydro, solid biomass, wind, solar and geothermal; or
- All RES, including hybrid fuels options.

2. Scope, in terms of activities:

- promotion of policies, regulations, best practices and market mechanisms
- assistance in project development



COMMITTEE'S DECISION

- **The Committee decided :**
 - **the initial step should be technical assistance to transition economies;**
 - **requested SC of EE 21 Project, to consider in May 2004, inclusion of RES-technical assistance programme, similar in nature to EE 21 Project activities.**