



Economic Commission for Europe

**PROGRESS ON SUSTAINABLE
ENERGY DEVELOPMENT
CSD-14**

14th Session of the Committee on Sustainable Energy

Geneva, 30 June 2005



**Division for Industrial Restructuring,
Energy and Enterprise Development**

BACKGROUND

- In 2000, ECE contributed to CSD-9
- CSD-14 (2006-2007 cycle)
- One thematic area: energy
- ECE Regional Implementation Forum, 15-16 December 2005, Geneva
- Background papers by Secretariat
- “Non-paper” circulated for comment



ENERGY POLICY

OBJECTIVES

**(Adopted by Committee and Civil Partners,
Nov. 2000)**

- **Access to high quality services**
- **Security of supplies**
- **Reduction of health and environmental impacts**
- **Well-balanced energy networks**



ENERGY POLICY OBJECTIVES

(Adopted by Committee and Civil Partners,
Nov. 2000)

- **Improvement in energy efficiency**
- **Application of environmentally-sound & economically viable technologies**



ACCESS TO HIGH QUALITY ENERGY SERVICES

- **No reliable comparative data**
- **10 ECE countries use less than 2,500 kwh per capita**
- **Anecdotal evidence; disruptions in economically disadvantaged countries (situation improving)**
- **Electricity blackouts in developed countries**
- **Improving or worsening ?**



ENERGY SECURITY

- **Petroleum availability of concern**
- **Concentration: oil & gas production/ reserves**
- **Increasing import dependence**
- **Growing reliance on Middle East/ OPEC for oil**
 - **political/social instability**
- **Longer supply routes**
- **Terrorism**
- **Increased sense of unease**



REDUCING HEALTH & ENVIRONMENTAL IMPACTS

- **Energy sector progress good**
 - however, still much to be done
- **Implementation rate slowing down**
 - despite policy preoccupation
- **Climate change of most concern**
 - existing targets difficult to achieve
 - emission trading beneficial to some countries



ENERGY NETWORK SYSTEMS

- **Market opening and liberalization**
 - increased economic efficiency
 - changed structure of market
- **New gas & electricity infrastructure**
 - diversification of transport routes
 - better integration
- **Transit issues**
- **Improving situation except for oil** (oil refineries)



IMPROVING ENERGY **EFFICIENCY**

- **Not receiving enough attention**
- **Improving in central and eastern Europe (somewhat less in CIS)**
- **Deceleration of rate of improvement in western countries**
- **Absence of comprehensive efforts**



NEW AND RENEWABLE ENERGIES

- R & D spending declining
- Less than 10% on renewables, less than 20% on EE
- Energy subsidies high
 - externalities not in pricing
- More effort on fossil fuel clean technologies



CLIMATE CHANGE

- **Carbon dioxide emissions:**
 - EU15: have risen & rising
 - CE & SEE: fell
 - CIS: fell
- **GHG overall have fallen**
- **CO2 risen most in transport**
- **Unlikely to meet Kyoto targets**
 - EU 15
 - USA & Canada



RENEWABLE ENERGY

- “New” renewable energy accounts for 2.2% of total world energy use
- Very slow increase in market share in total primary and electricity generation
- More effective policies, measures and technologies required



IMPLICATIONS

Fossil fuels

- Medium term: increased use of gas
- Longer term: cleaner coal/oil technologies
 - hydrogen & carbon sequestration
- Mainstay of energy supplies

Nuclear power

- Continuing pause in development
- Important element of diversity

Renewables

- Increasing but not panacea



STRATEGIC **CONSIDERATIONS**

- **Energy security, import dependence & reliance on Middle East an issue**
- **Fossil fuels will remain mainstay for many decades**
- **Energy efficiency improvements slowing**
- **Prospects for nuclear and coal improving**
- **(Boutique) energy sources: renewables, hybrides and hydrogen**



MULTI- PRONGED POLICY **APPROACH FOR SED**

- **Assist poor with basic services**
- **Lower dependence, oil in transport**
- **Improve EE/ lower intensities**
- **Internalize externalities, price system**
- **Shift energy sources to more environmentally benign/lower carbon**
- **Improve technologies for production and use of oil, coal and nuclear power**

