# Energy efficiency and climate policy

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**14 May 2007**

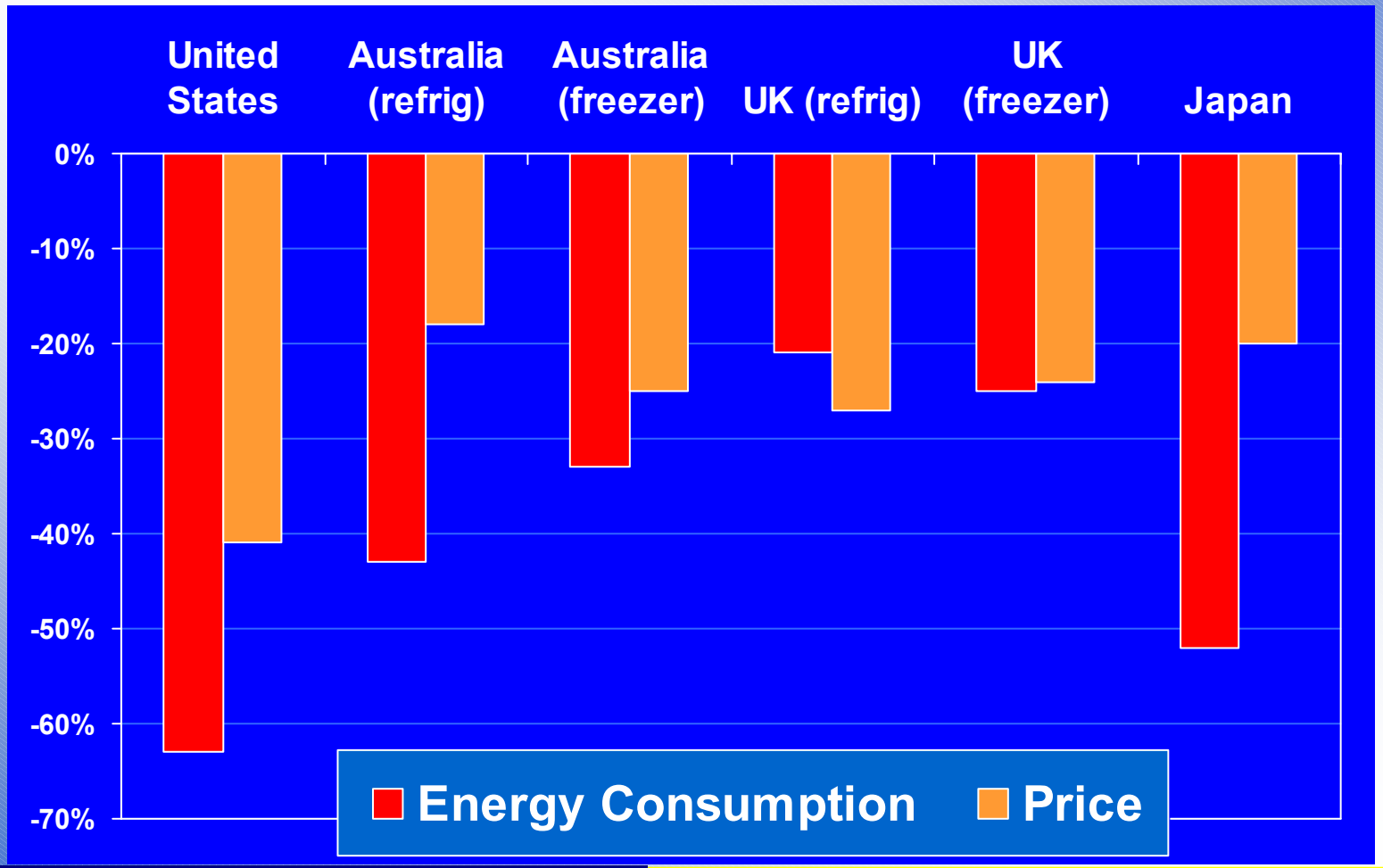
# The contribution of energy efficiency in IEA countries*

## Without energy efficiency improvements since 1973

- Energy consumption would be 56% higher today
- $CO_2$ emissions would be ~4Gt$CO_2$ higher
- Energy efficiency is the <u>first fuel</u>

* Countries sampled include: Australia, Denmark, Finland, France, Germany, Italy, Japan, Norway, Sweden, United Kingdom, United States – 80% of IEA total energy demand

# Existing energy efficiency regulations Impacts on performance and price: *Cold appliances*

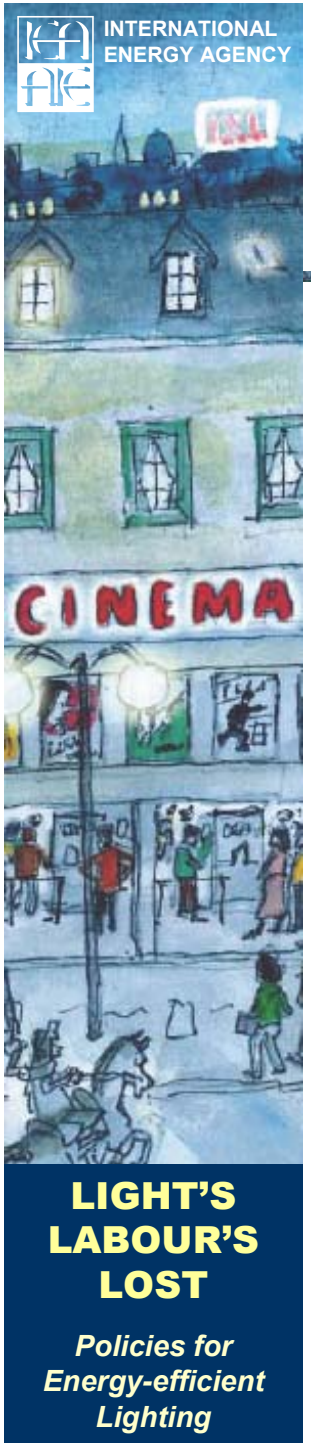


# Alternative Policy Scenario – 2030
# Cost Effectiveness of Policies

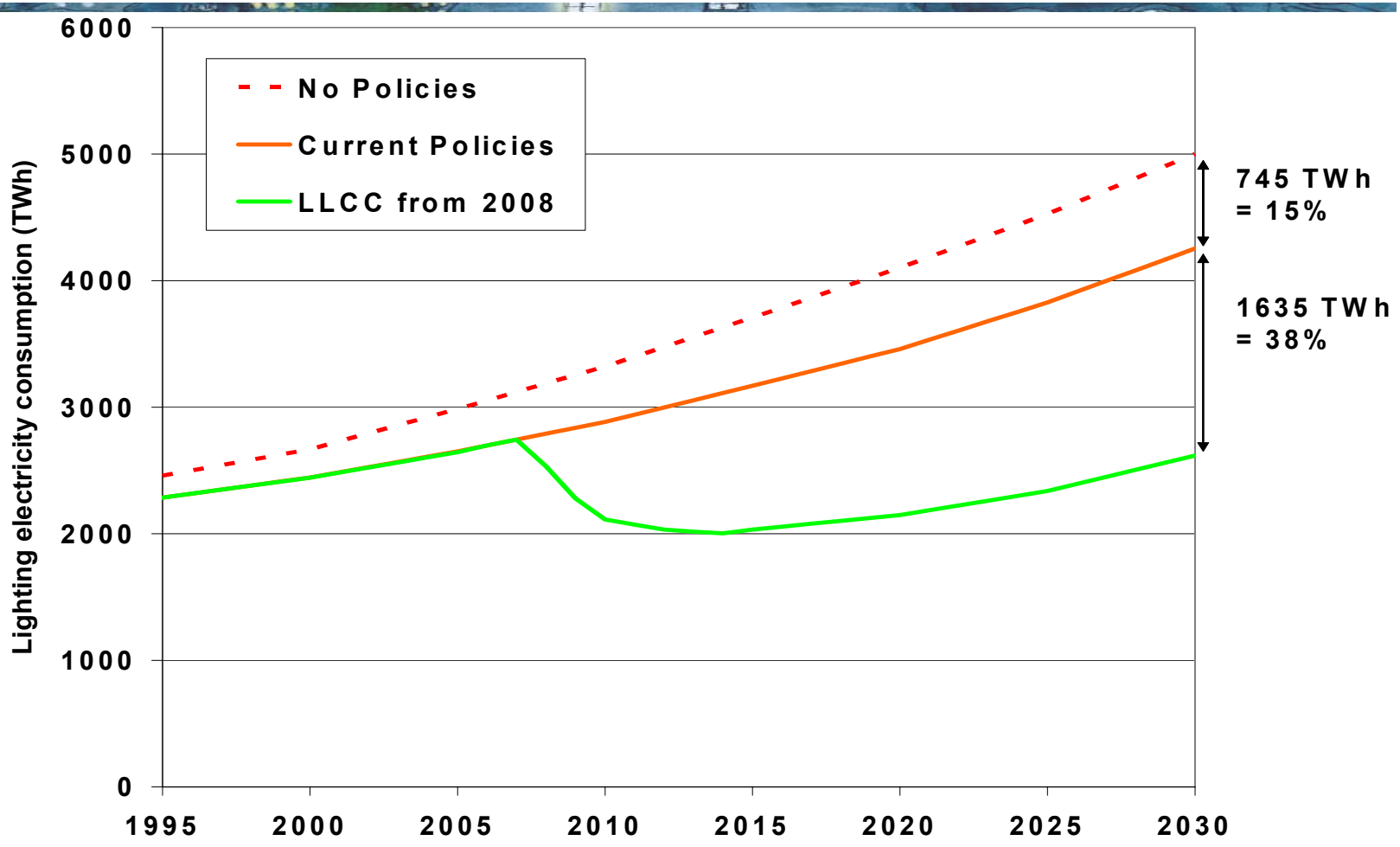
- Total energy investment – from production to consumption – is lower than in the Reference Scenario
- Consumers spend $2.4 trillion *more* in 2005-2030 in more efficient cars, etc.
- ..but over $3 trillion *less* investment is required on the supply side
  - *Each $1 invested in more efficient electrical appliances saves $2.2 in investment in power plants & networks*
- The (sometimes) higher initial investment by consumers is more than offset by fuel-cost savings

WORLD ENERGY OUTLOOK

INTERNATIONAL ENERGY AGENCY




# Lighting: Cost-Effective Savings
## (From IEA's Light's Labour's Lost)




***Global lighting cost could be reduced by US$ 2.6 trillion and 16 $GtCO_2$ could be saved (2008-2030)***