

# Global Trends in Energy Efficiency and Renewables



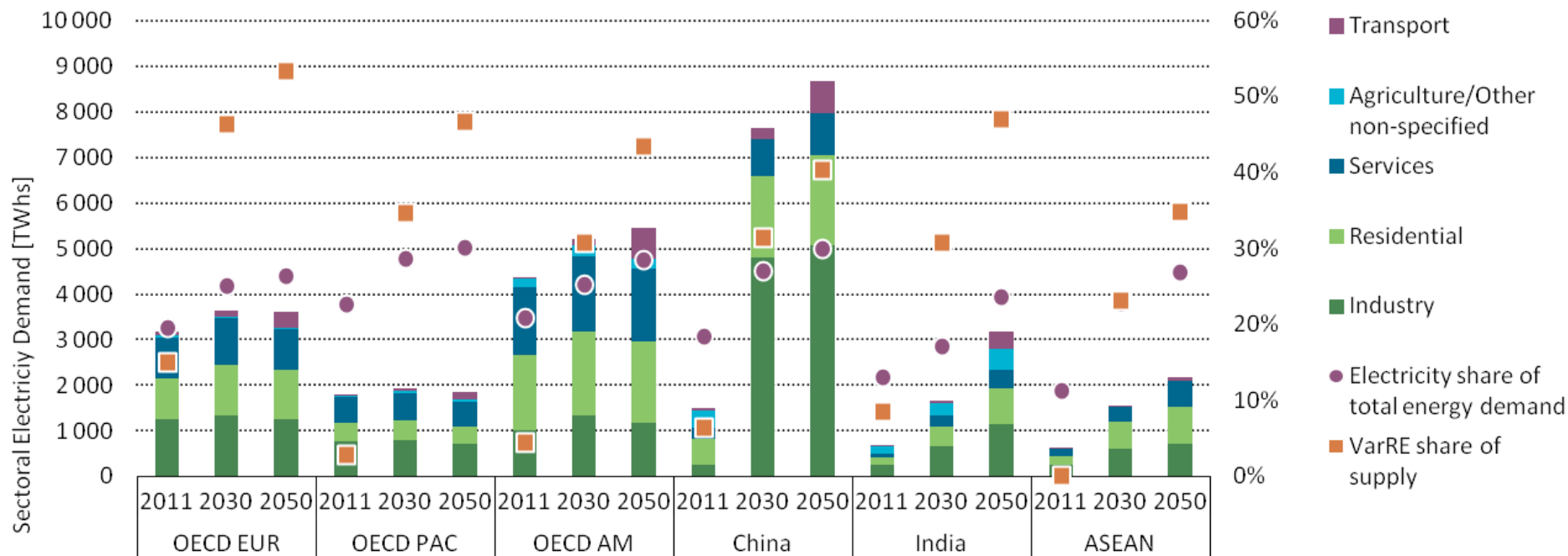
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Paris, 13 March 2014, IEA IEC ISO Workshop on International Standards in support of policies for energy efficiency and renewable energy

- Some long-held tenets of the energy sector are being rewritten
  - Countries are switching roles: importers are becoming exporters...
  - ... and exporters are among the major sources of growing demand
  - New supply options reshape patterns of trade
- But long-term solutions to global challenges remain scarce
  - Fossil-fuel subsidies increased to \$544 billion in 2012
  - 1.3 billion people lack electricity, 2.6 billion lack clean cooking facilities
  - Renewed focus on energy efficiency, but CO<sub>2</sub> emissions continue to rise
- Energy prices add to the pressure on policymakers
  - Sustained period of high oil prices without parallel in market history
  - Large, persistent regional price differences for gas & electricity

***Energy efficiency and renewable energy are key to secure and sustainable future energy systems***

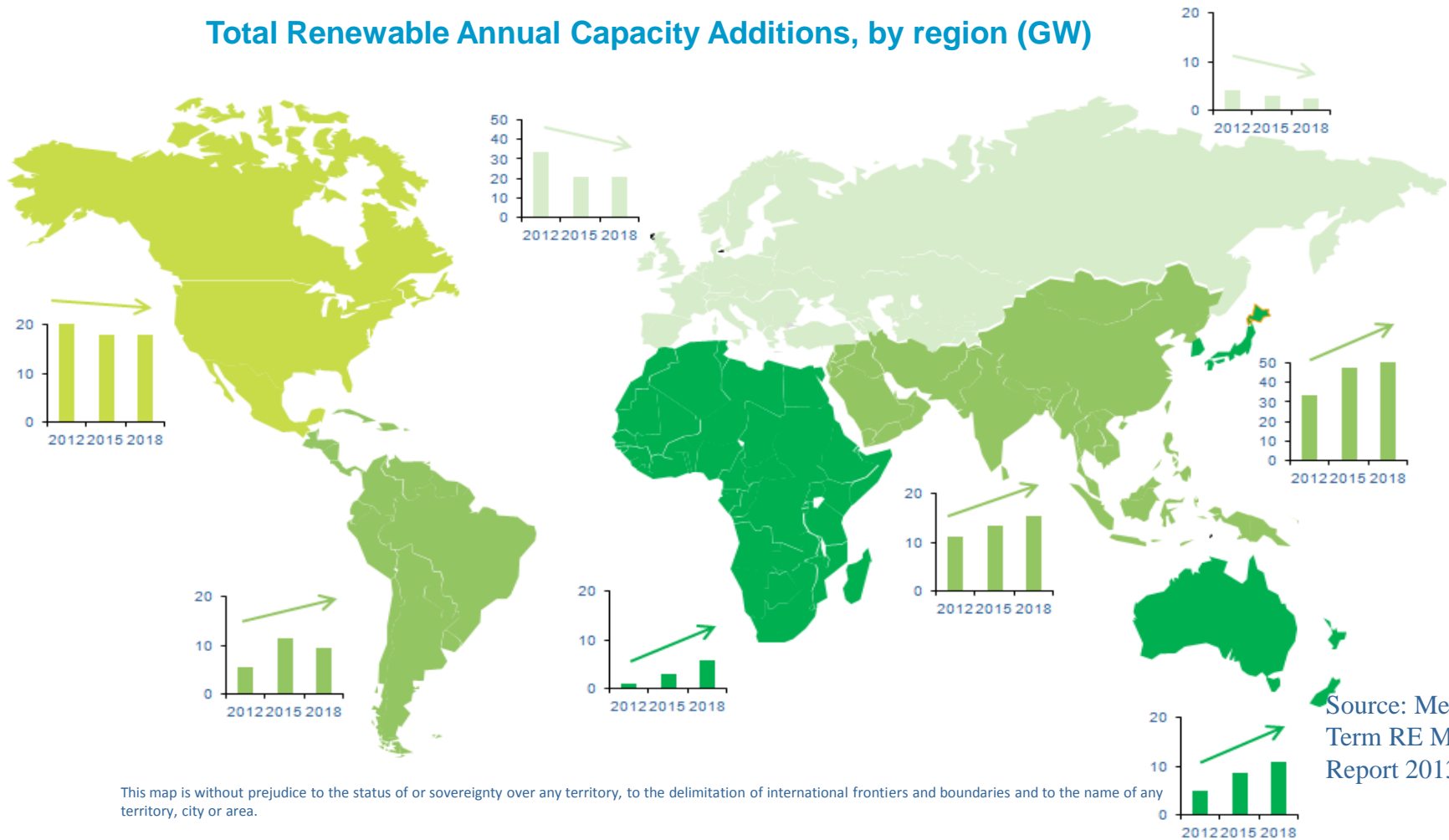
# Global electricity demand



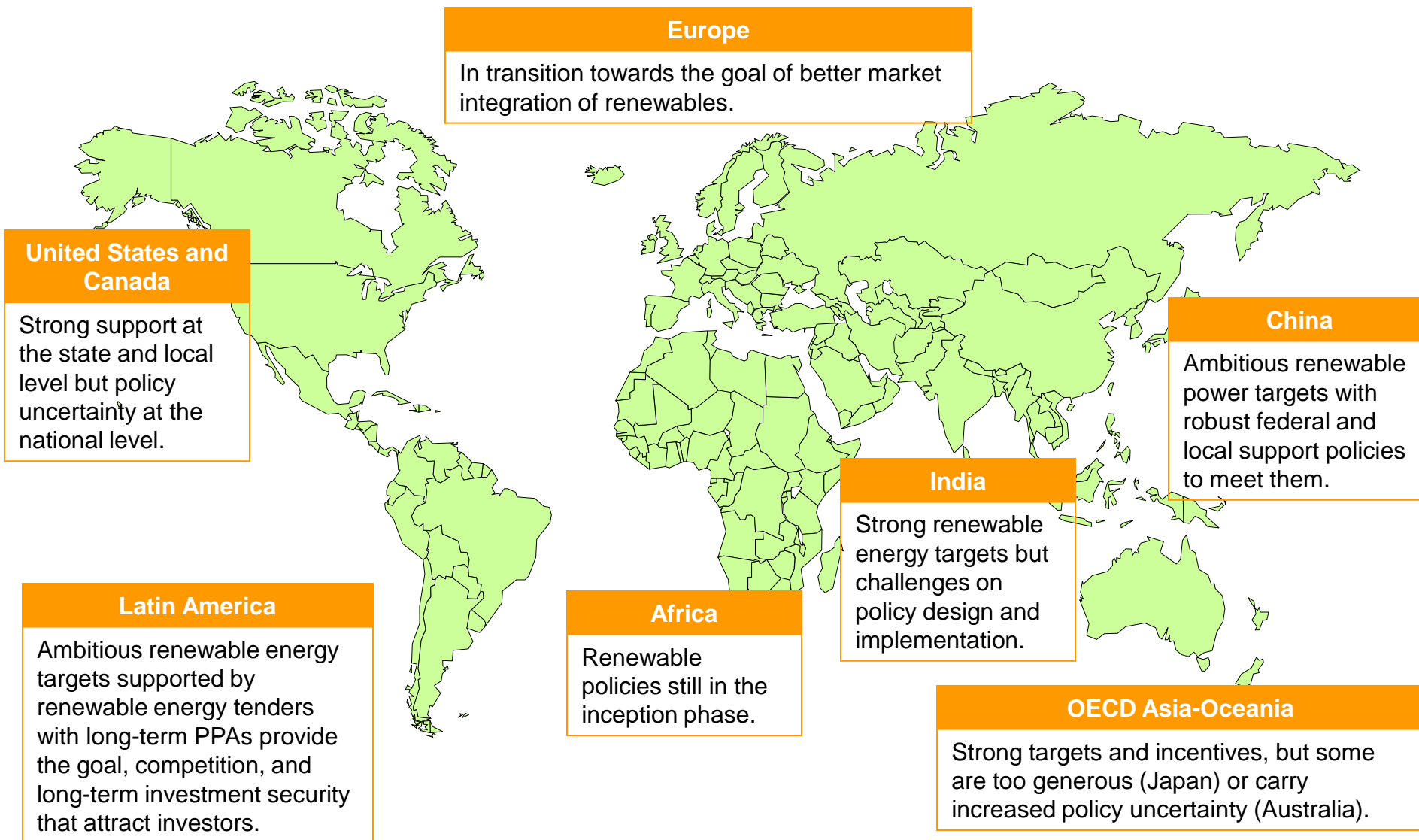
***Differences in growth of electricity demand and sectoral distribution require targeted systems development plans***

# Renewable energy growth is spreading

Total Renewable Annual Capacity Additions, by region (GW)

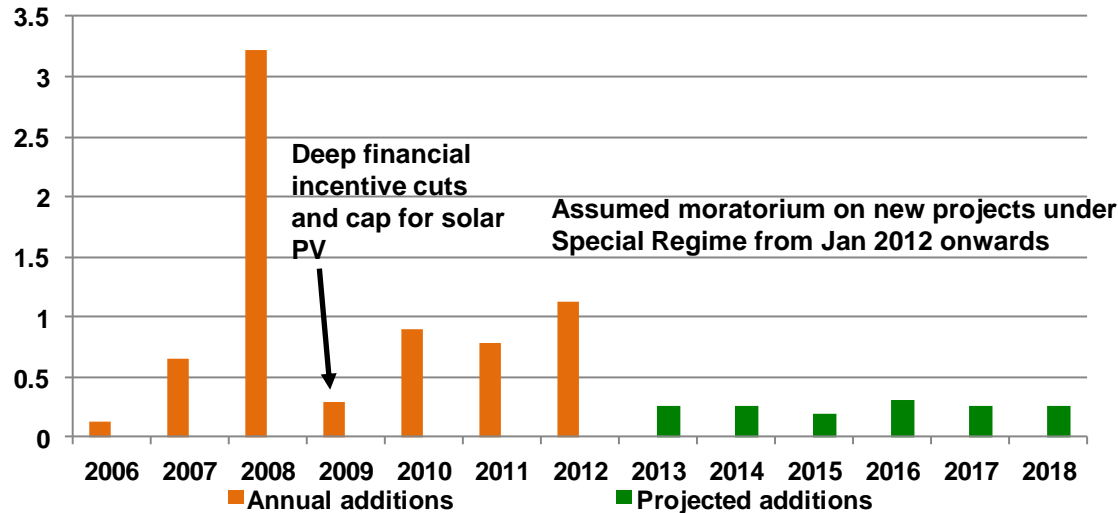


# Renewable power markets and policies continue to evolve



# Policy uncertainty is the number one risk for renewable energy deployment

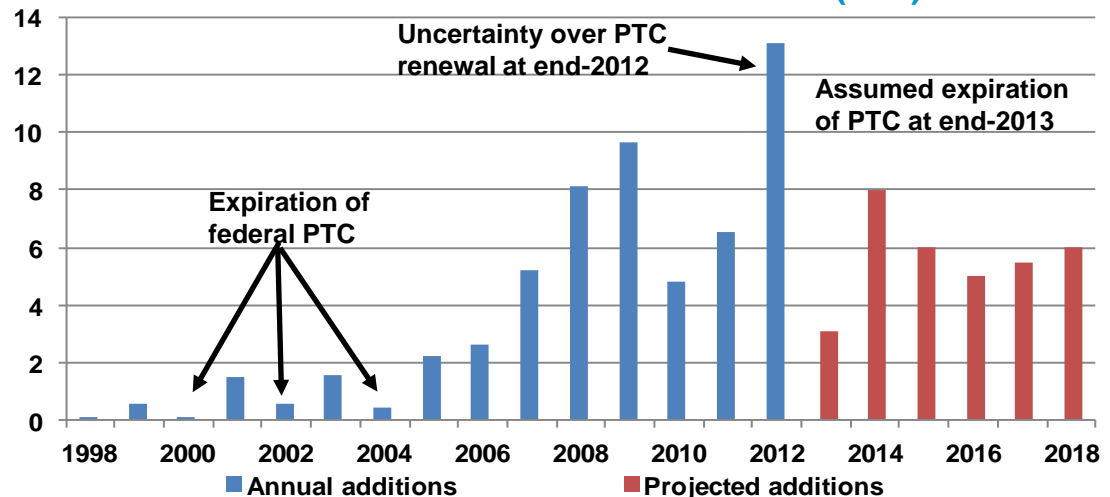
## Spain solar PV + CSP annual additions (GW)



Abrupt, retroactive policy changes

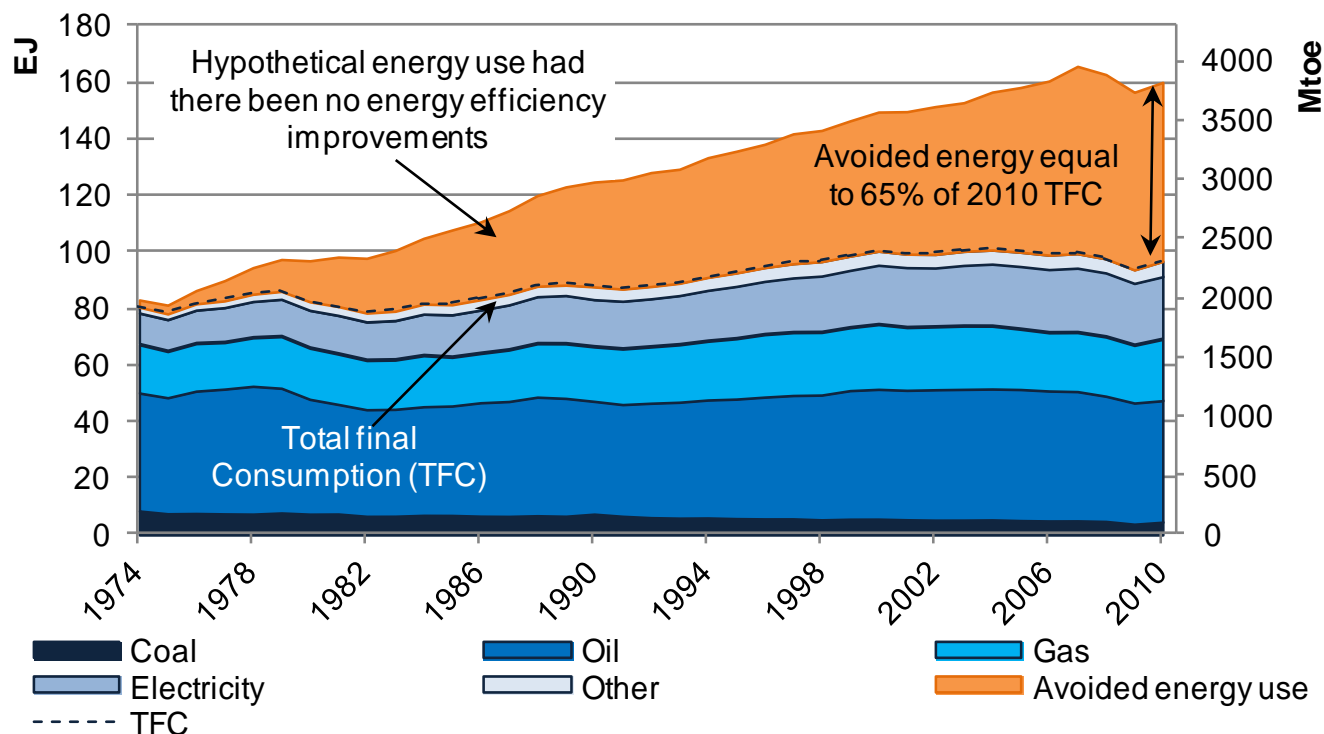
Stop & go policies

## US onshore wind annual additions (GW)



# Energy efficiency – our first fuel

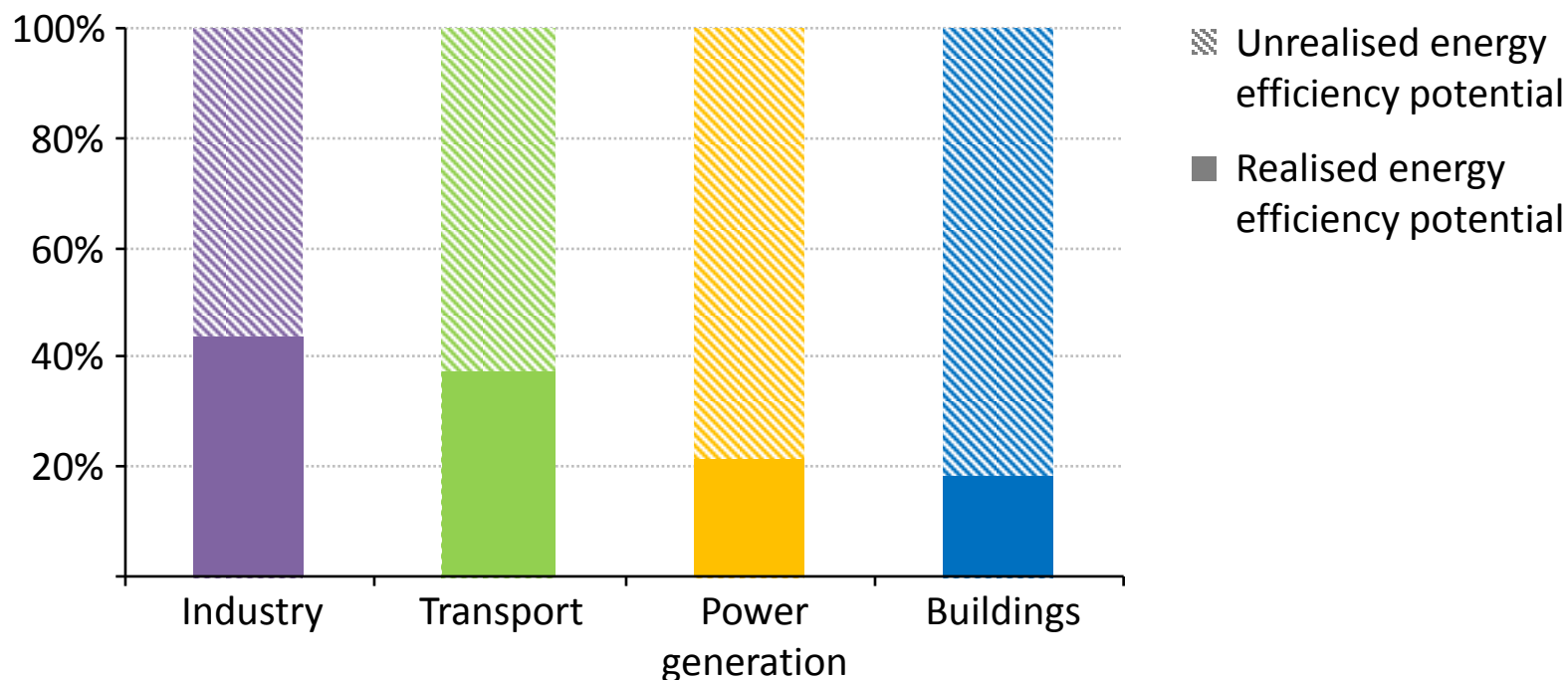
Between 1974 and 2010, energy efficiency was the largest energy resource in a subset of 11 IEA countries



**Cumulative avoided energy consumption due to energy efficiency in these 11 IEA countries amounted to over 1 350 EJ (32 billion toe)**

# Energy efficiency: a huge opportunity going unrealised

## Energy efficiency potential used by sector in the WEO 2012 New Policies Scenario



***Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035***  
***Policies are needed to remove barriers and facilitate market creation***



- **Despite good progress in the areas of energy efficiency and renewable energy – further efforts are warranted**
  - Policies play an important role in creating and maintaining predictable and reliable markets
  - Both energy efficiency and renewable energy still face barriers that policies can address or mitigate
  - Long-term policy certainty is crucial to technology and market development
  - To counteract escalating energy demand - significant efforts will be needed in developing and emerging economies

- **International standards play a key role in supporting the development of policies and facilitating market development**
  - International standards can reduce time and resources needed to develop policies – particularly important for countries that are still in the initial phases of developing their policy frameworks
  - International standards create the certainty and clarity needed for market development and allow investors to develop viable business models
  - Keeping pace with technology developments is essential - international cooperation and dialogue is key
- **This workshop is an opportunity to start developing an actionable strategy to advance international standardisation processes that support energy efficiency and renewable energy policy**