TNT TECHNOLOGY DATABASES

PFUDB, ECDB, ST-ET

Motivation

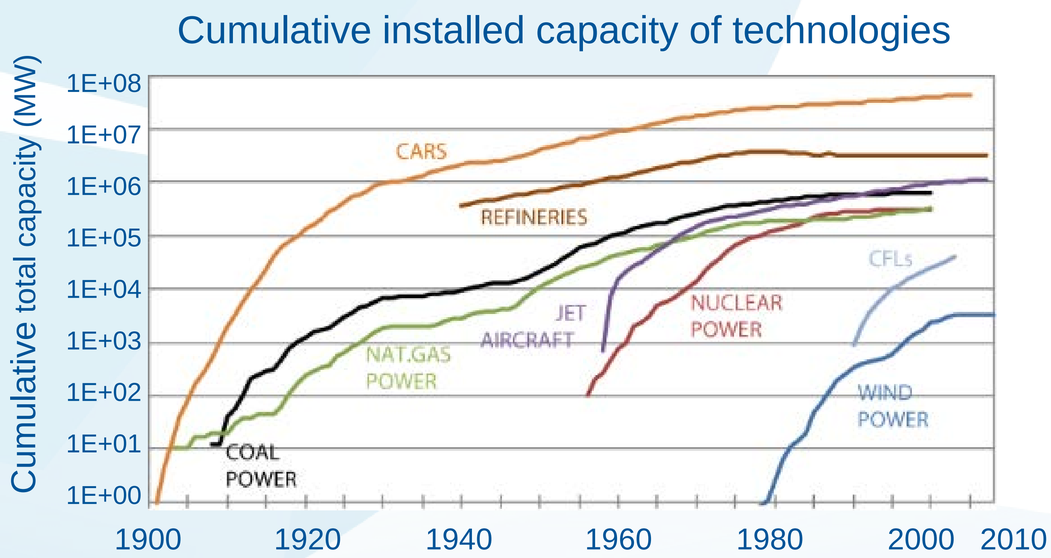
TNT databases are open research tools for IIASA and the science community helping to understand *trends, patterns,* and *dynamics of technological change.*

Key features

- ✓ The databases contain *historical data of relevance for future scenarios*
- ✓ Combine *supply and end-use* perspectives
- ✓ Describe transformation *outputs/services* in addition to *inputs*

Scaling Dynamics of Energy Technologies (ST-ET)

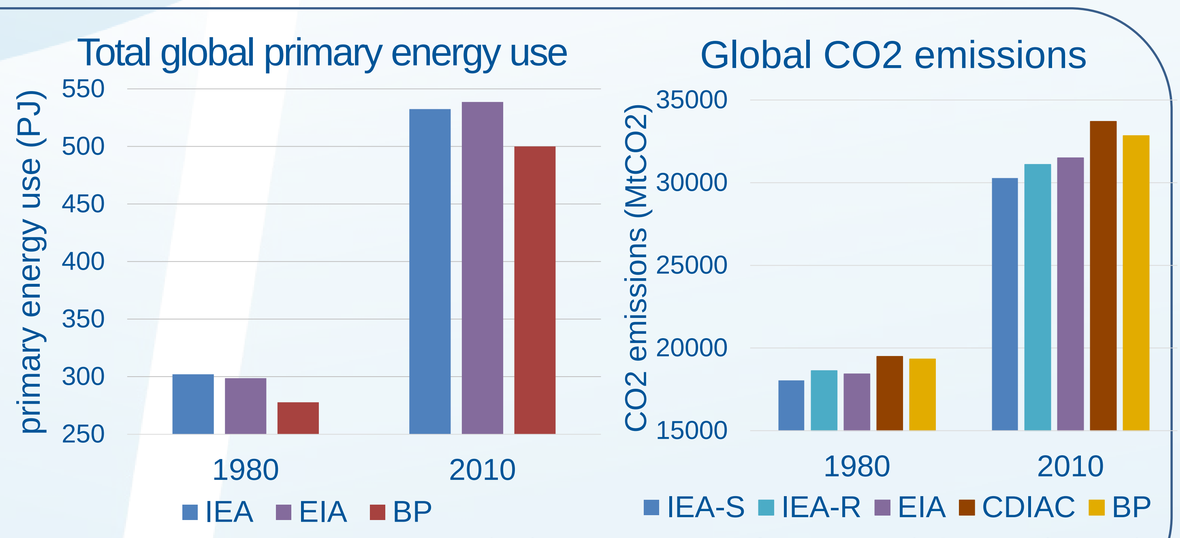
- historical patterns of technological change
- "reality check" for scenario formulation and validation



Source: Wilson et al. 2013

Energy and Carbon Emissions Inventories Database (ECDB)

- compares & harmonizes energy and carbon emissions data published in major international inventories (IEA,EIA,BP,UN)
- quantifies inventory and carbon-tax uncertainty

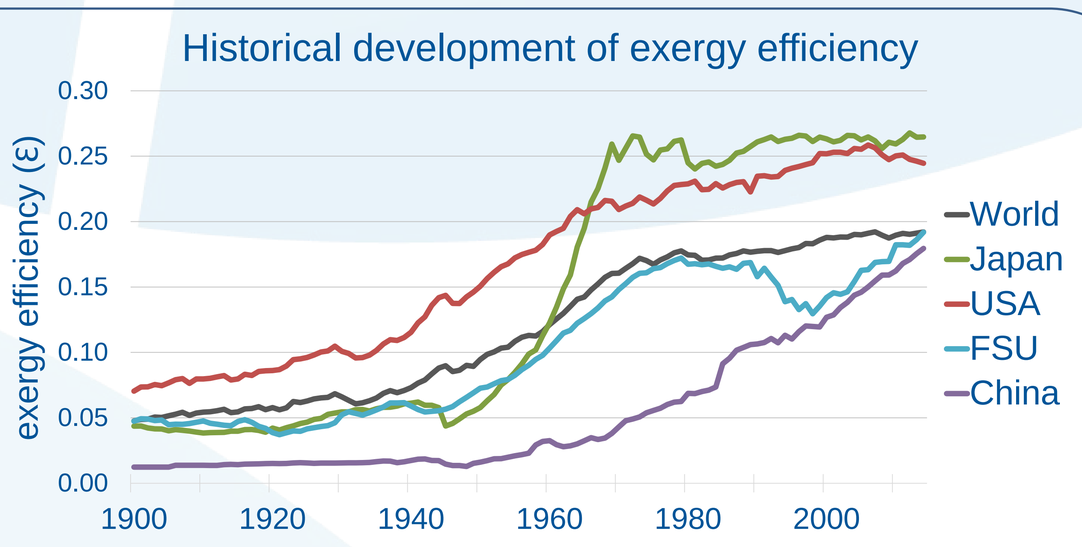


Adapted from Macknick 2011

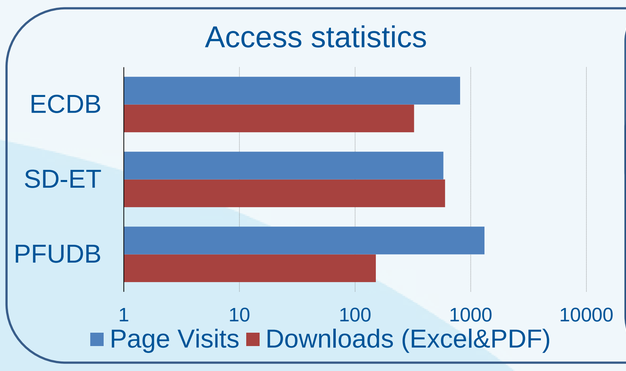
IEA = International Energy Agency, R = reference approach, S = sectoral approach,
EIA = US Energy Information Agency, BP = BP Statistical Review of World Energy,
CDIAC = Carbon Dioxide Information Analysis Center (UN)

Primary, Final and Useful Energy Database (PFUDB)

- primary, final, useful energy and exergy
- data: 1900 to 2014
- disaggregation: spatial, sectorial, energy carriers, end-use types



Based on data in De Stercke 2014



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