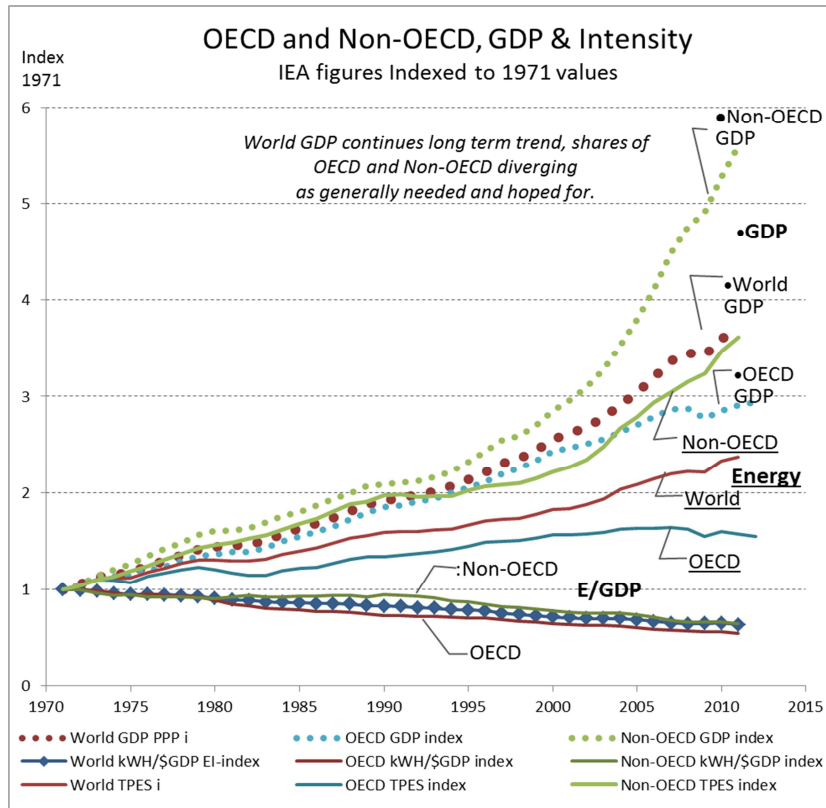


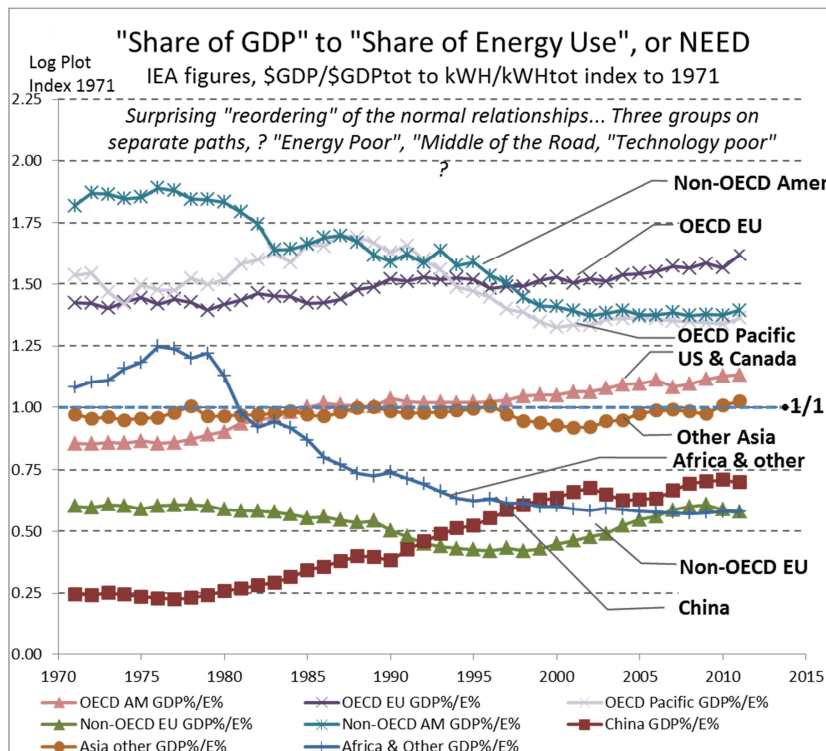
# A World View of Off-Shore Energy use

A country's Share of the World's GDP per Share of World Energy, (Relative Economic Energy Dependence 'NEED') is a strong indicator of how much of its economy is fed by off-shore energy services. Countries do have different energy productivities, but World competition actively adjusts to obtain competitive energy uses wherever they are found. So like waves on a pond... the national accounts vary in relation to each other, and the global accounts are smooth and reflect the gradual changes of the system as a whole.



**a.** We see strong diverging trends in Energy use and GDP for OECD and Non-OECD groups over the past 40 years

- As the less developed remain smaller, but grow faster, the more developed are giving them development space.
- The Energy/GDP (intensity) is continuing it's long historic path of quite steadily decline, facilitating both rapid growing GDP and increasing total energy use.
- The Energy/GDP curves are NOT diverging, though, showing how smoothly the interlocking productivities of the world economy "level the playing field" for energy services, delivered to where they are most valued.



**b** The NEED of the major 8 World Sectors shows much more variation, and you can see some of the fitting shapes that cause the total to be a straight line.

- The US & Canada are close to the 1/1 average, but steadily rising
- The EU, Japan and Australia are ~1.5/1 rather dependent on Off-Shore energy services, lacking abundant sources.
- So the rich "Energy Poor" economies need to purchase more of their energy in the form of energy services from their neighbors
- Likely causing the impression the EU is achieving more in sustainability, greatly out performing the US & Canada.
- The National Energy Accounts are not set up to trace trade in energy services, only in materials, requiring a "Shares of GDP" proxy measure to find it.