

Energy Efficiency: the 'Prosperity fuel' for developing countries

*(moving beyond savings ...
to the 'direct growth impacts' of
a lot more goods and services)*

World Bank Global Energy Practice – Energy Efficiency
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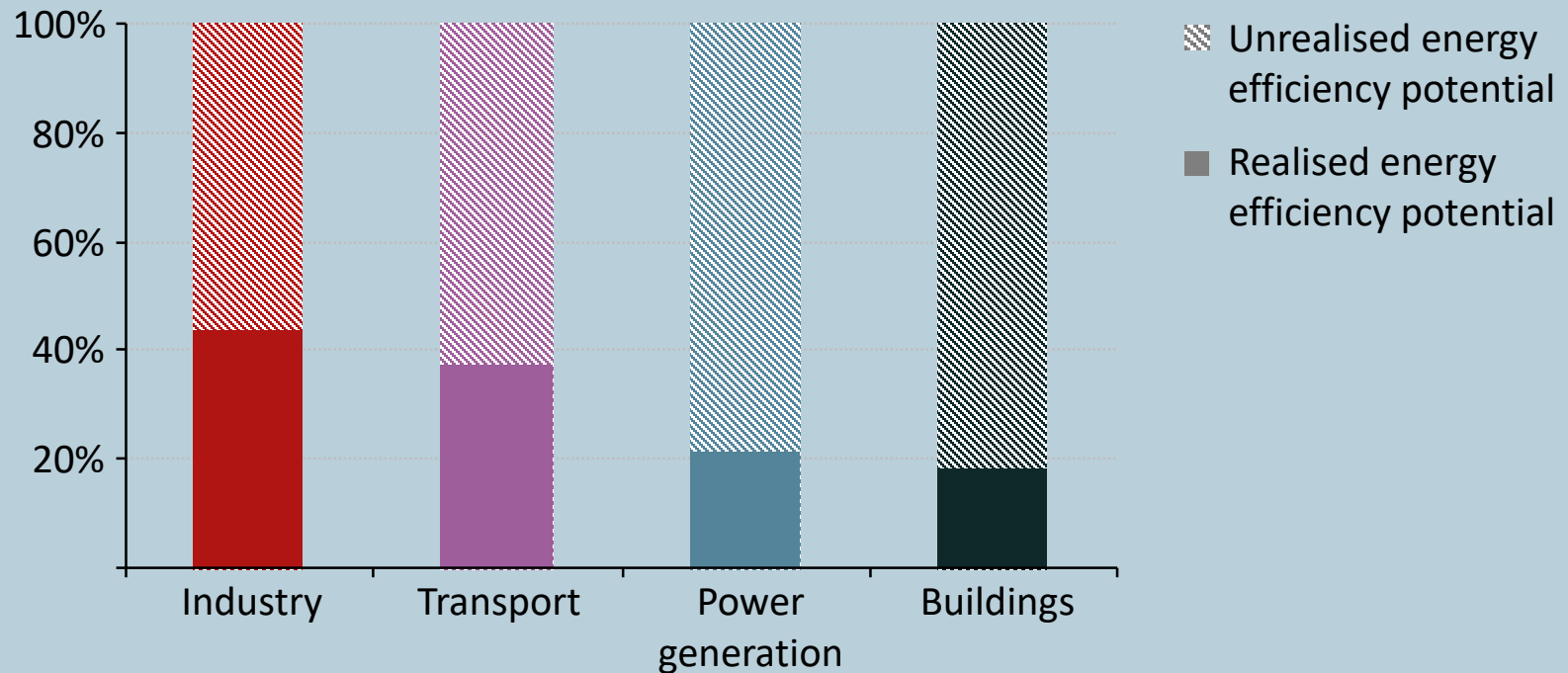
Act 1

Energy Efficiency has been a tough sell

A huge energy efficiency opportunity is going unrealised

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



Two-thirds of the profitable investments to improve energy efficiency remains untapped in the period to 2035

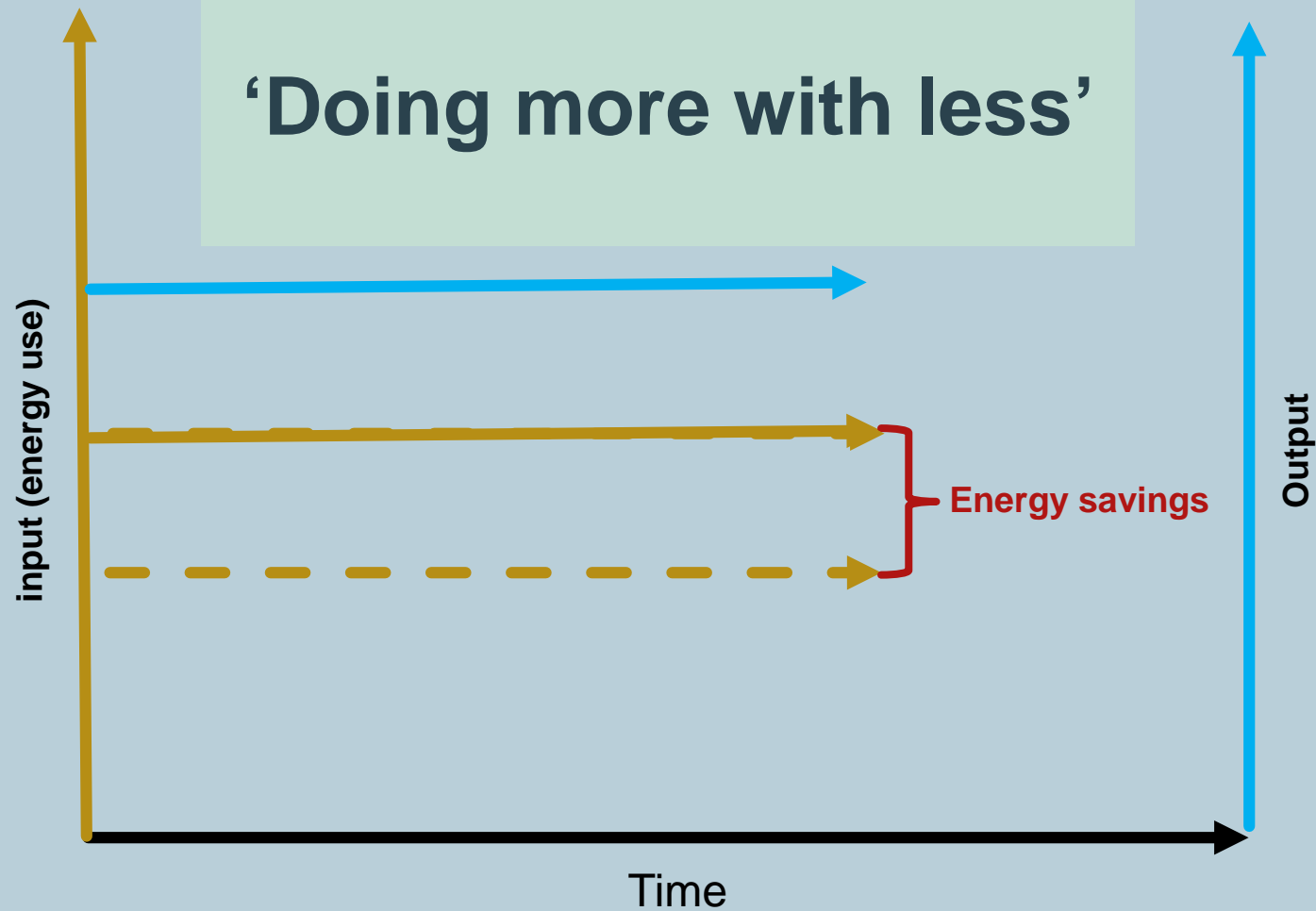
Even though EE has multiple benefits

- ▶ **Lower** energy expenditures (**savings**)
- ▶ **Lower** energy imports
- ▶ **Lower** pollutants
- ▶ **Lower** GHG emissions
- ▶ ...

Act 2

*EE: 'doing more
with less'*

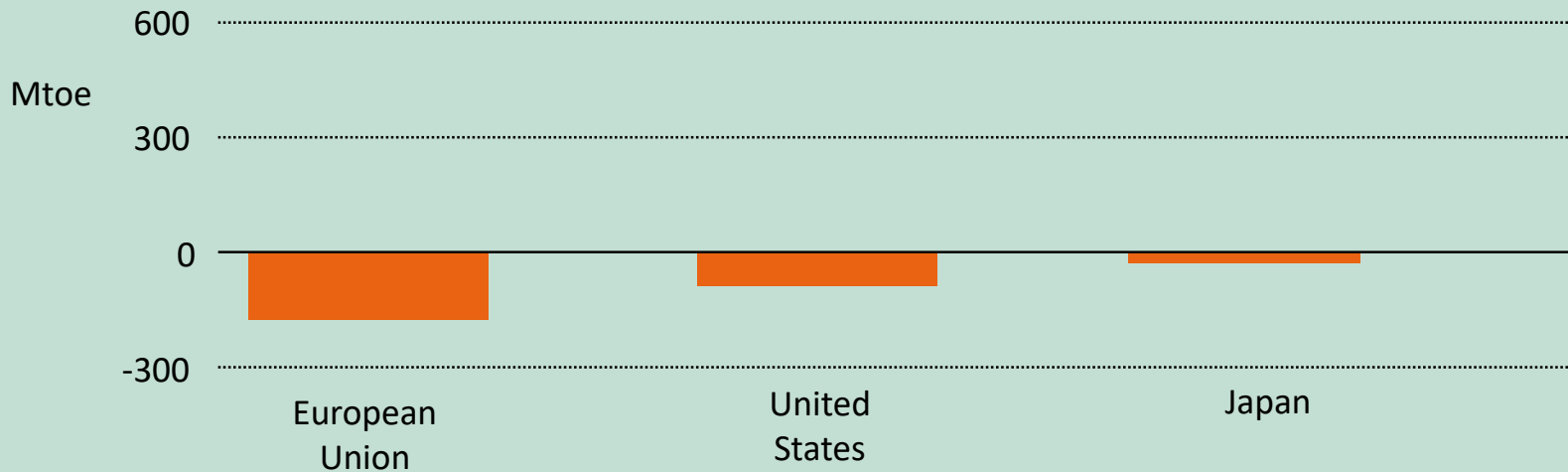
EE: generating savings and



Developed countries looking ahead: poised to do more with less

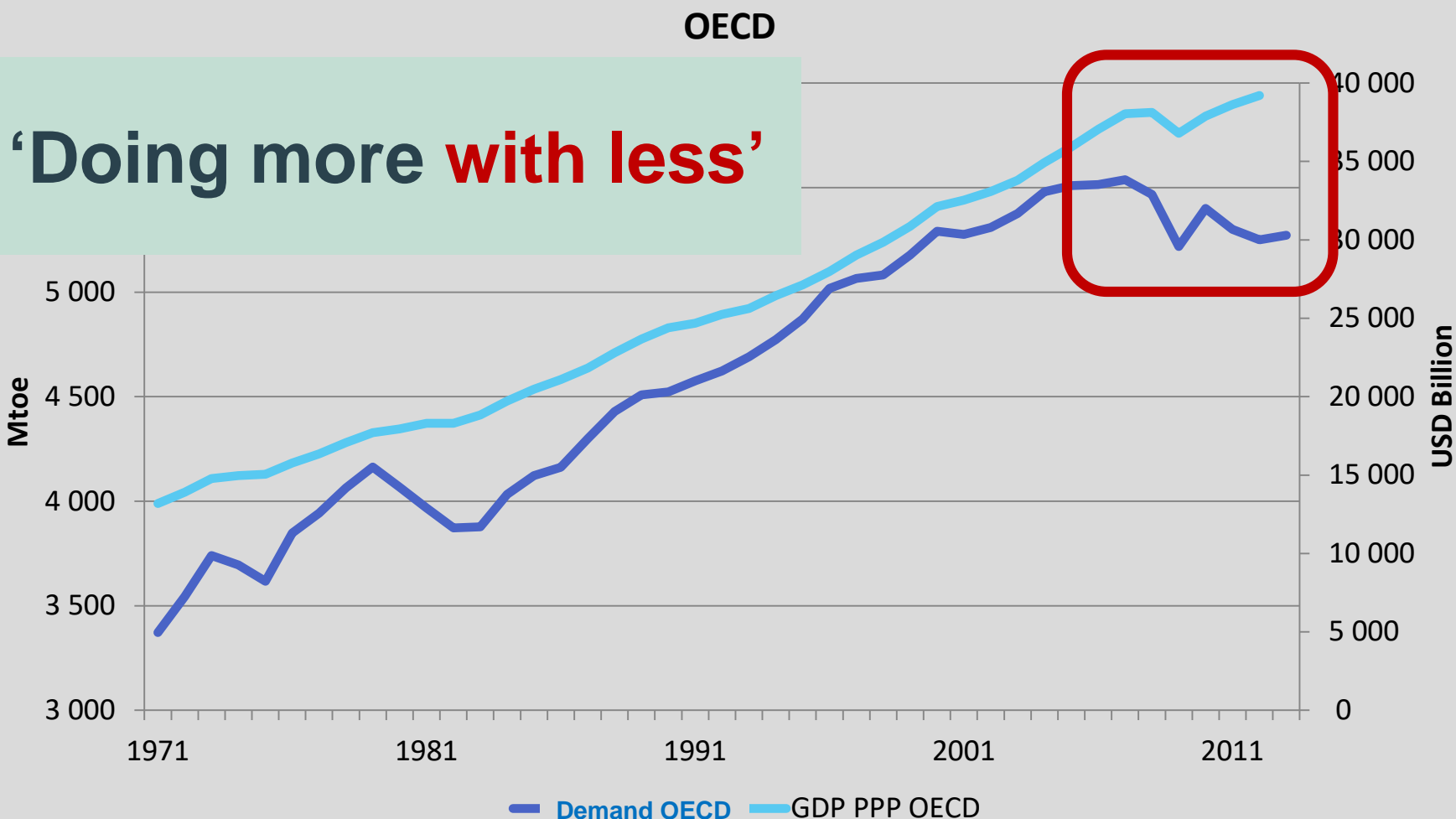
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Projected change in energy demand in selected regions, 2014-2040



GDP has started to decouple from energy in the OECD

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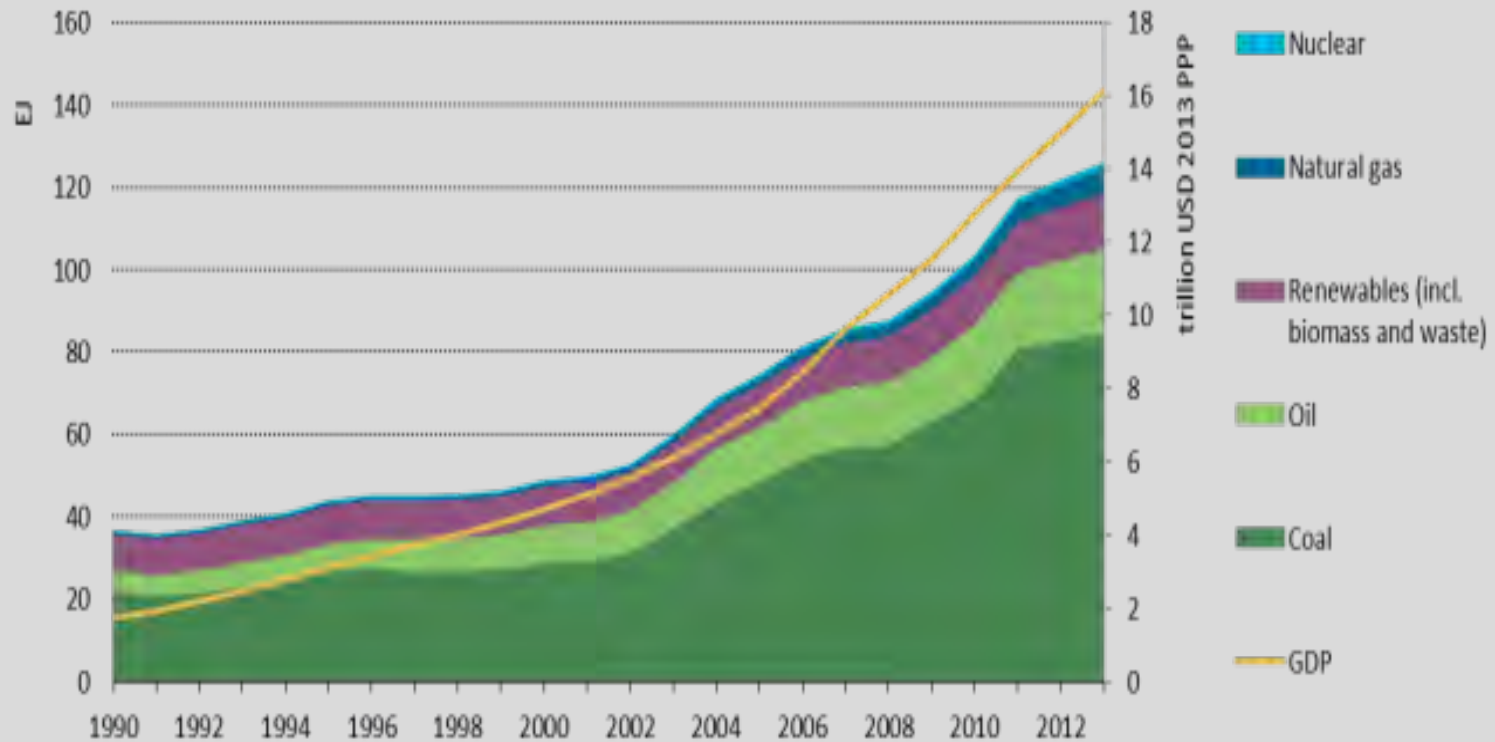


Act 3

Energy and economic growth

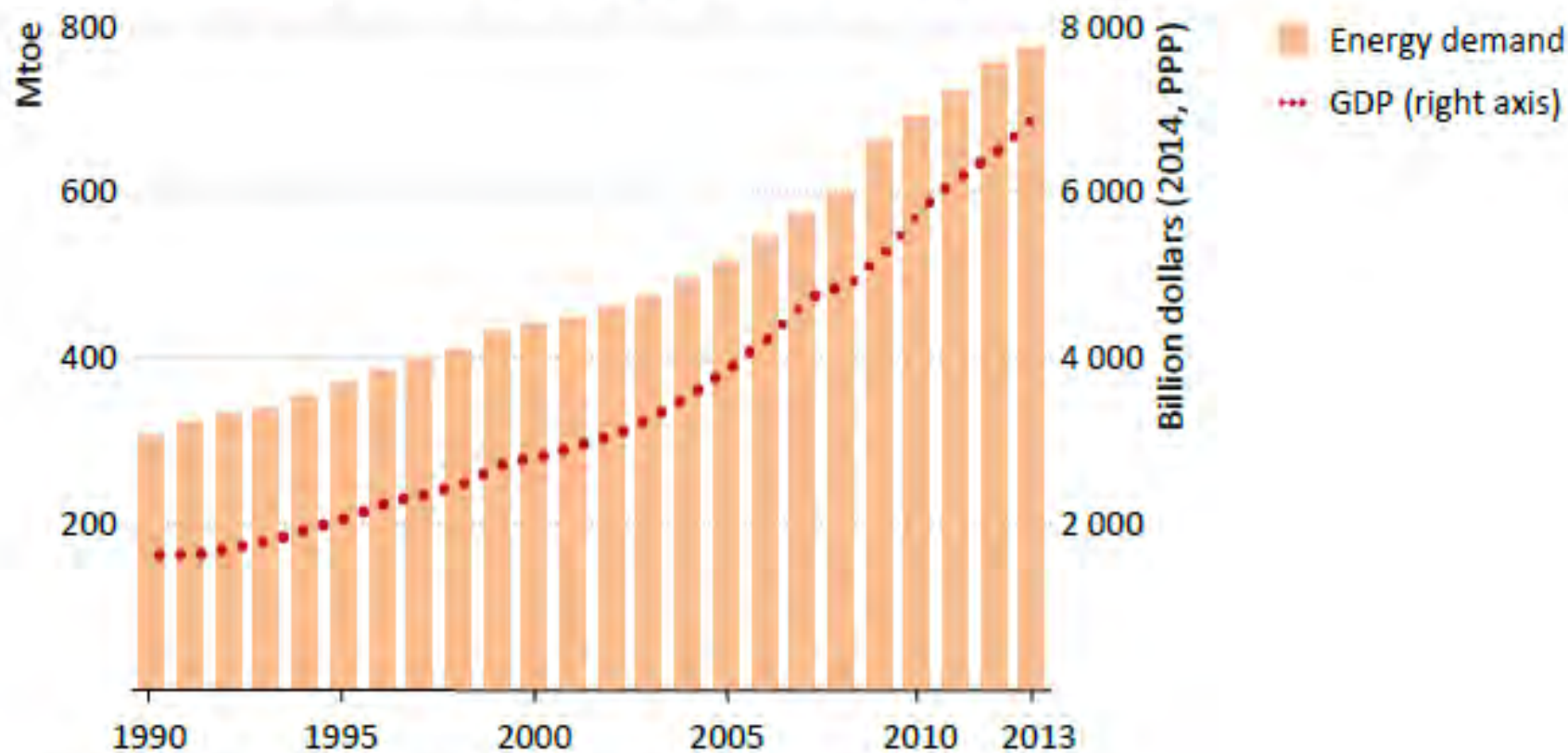
GDP and domestic energy demand: partners in China's growth to date

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GDP and domestic energy demand: partners in India's growth to date

Primary energy demand and GDP in India

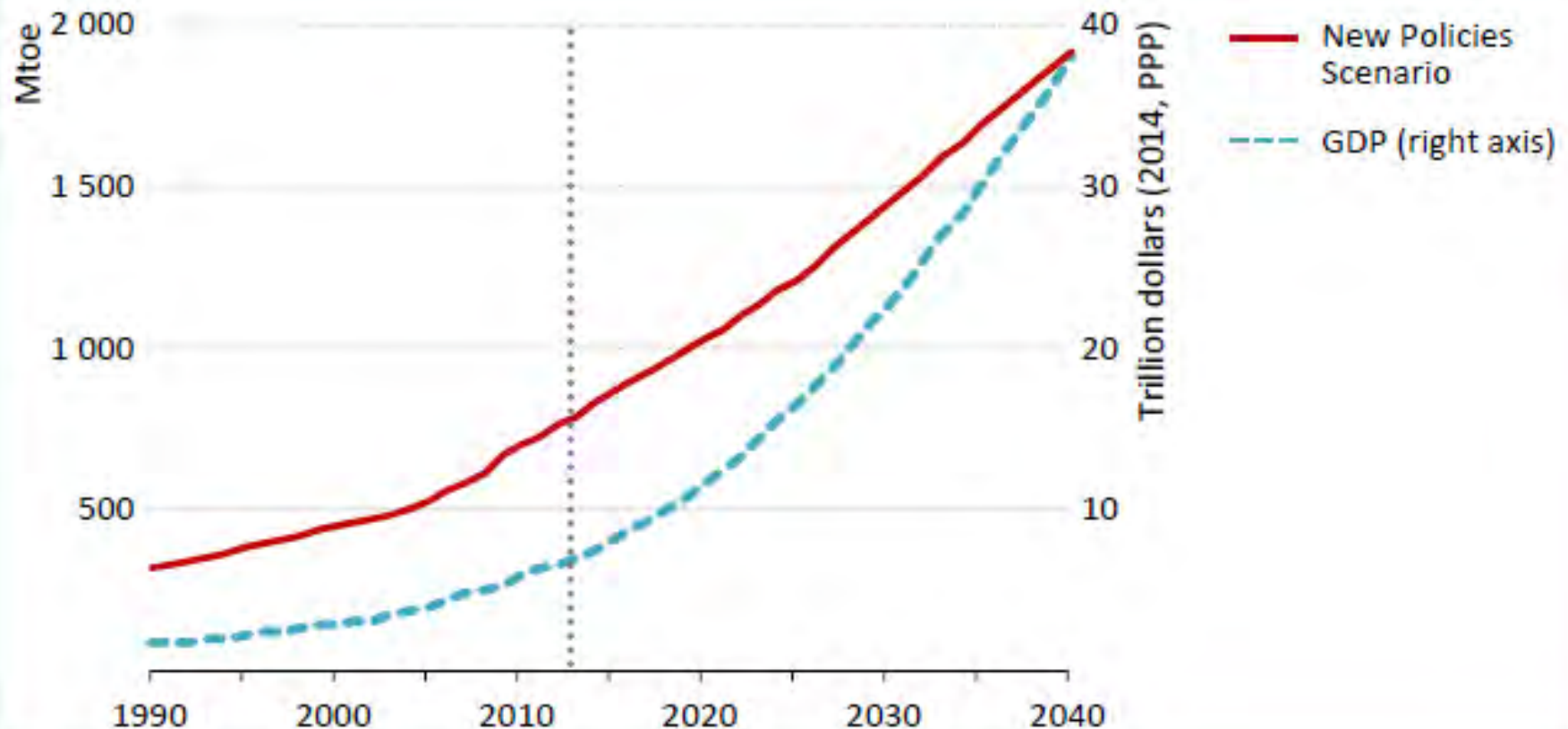


Note: Mtoe = million tonnes of oil equivalent.

Future in India: massive energy growth accompanies future development

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GDP and primary energy demand growth in India in the New Policies Scenario

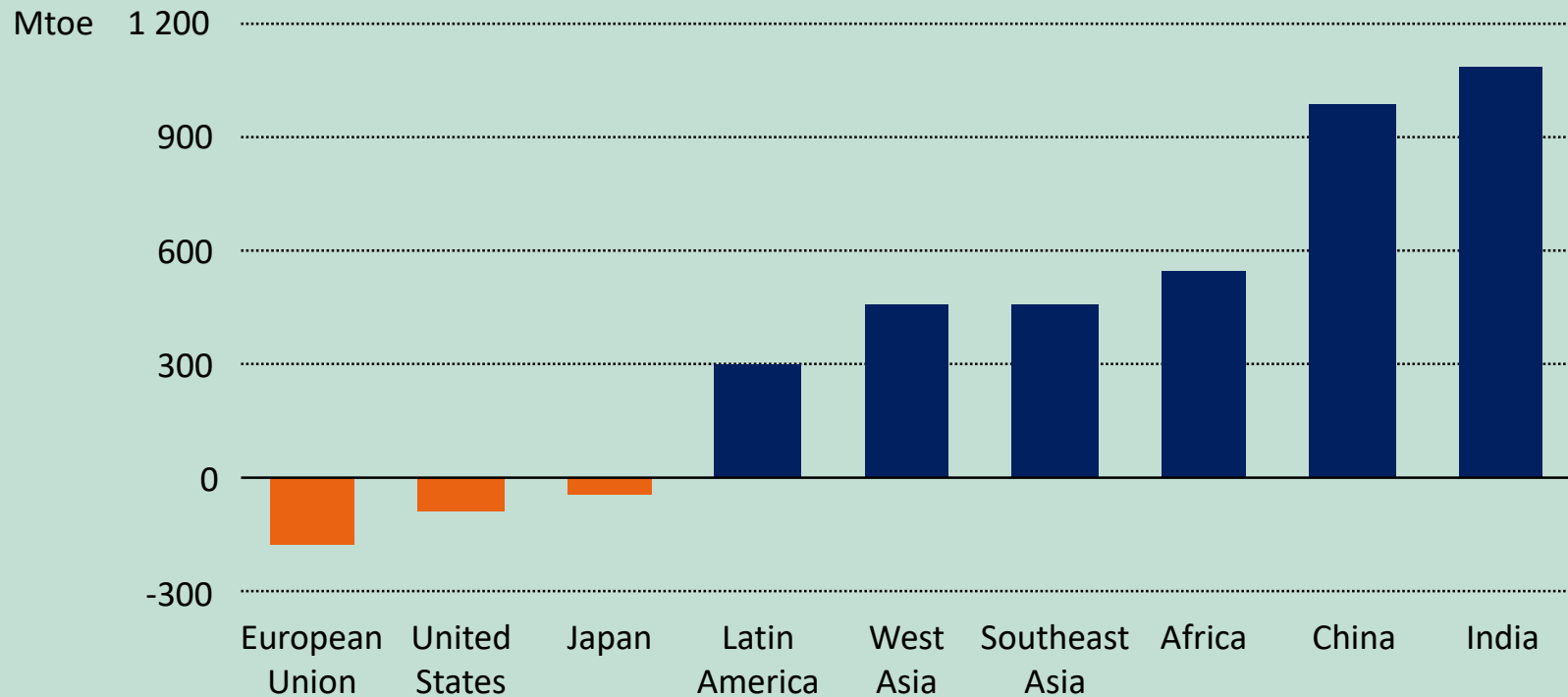


Note: PPP = purchasing power parity.

More energy in developing countries to accompany future development

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Projected change in energy demand in selected regions, 2014-2040

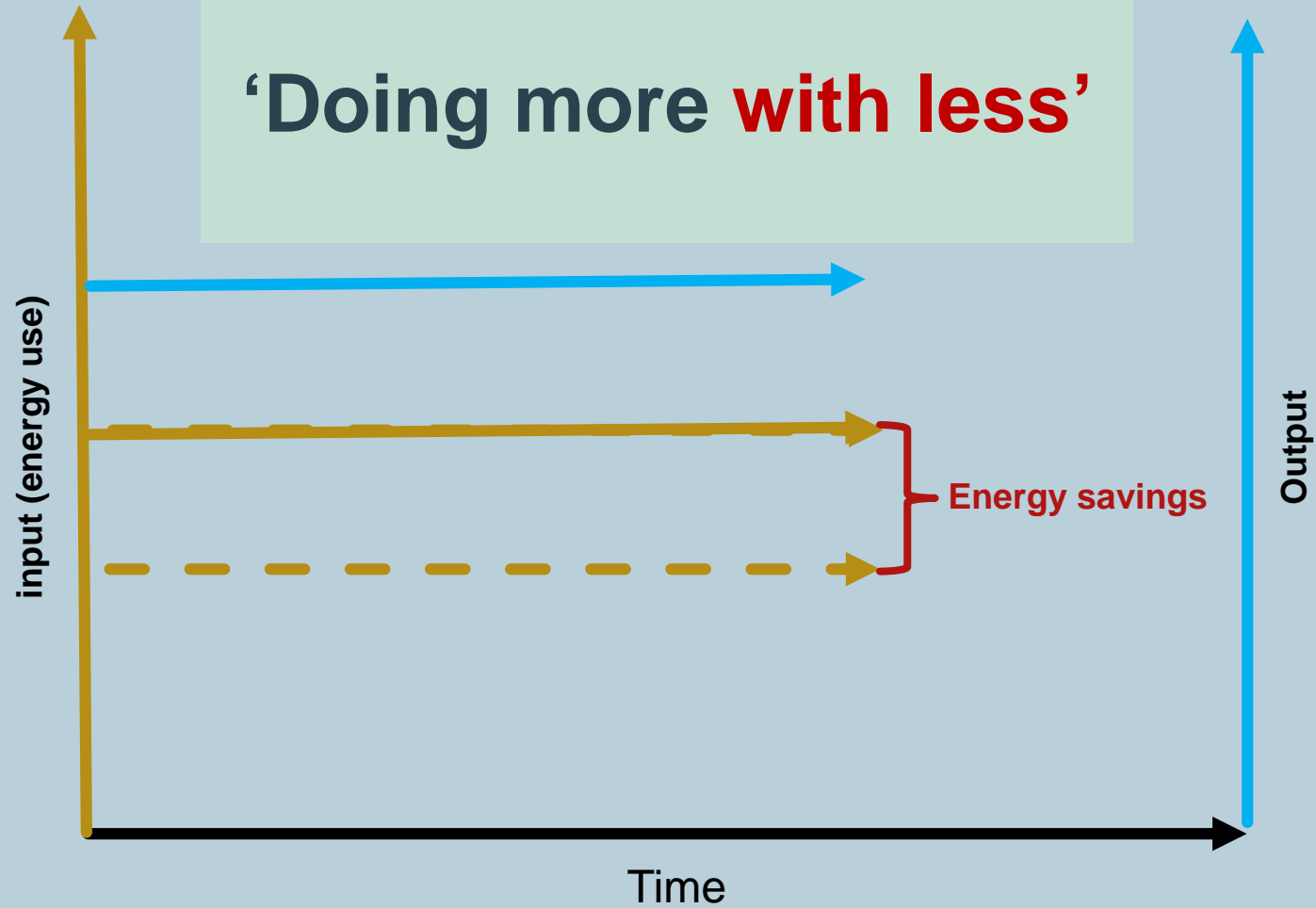


*Increased energy use in
developing countries
fuels the
additional goods and services
that are key to delivering
greater prosperity*

Act 4

*'doing more **with less**'*
– lost in translation

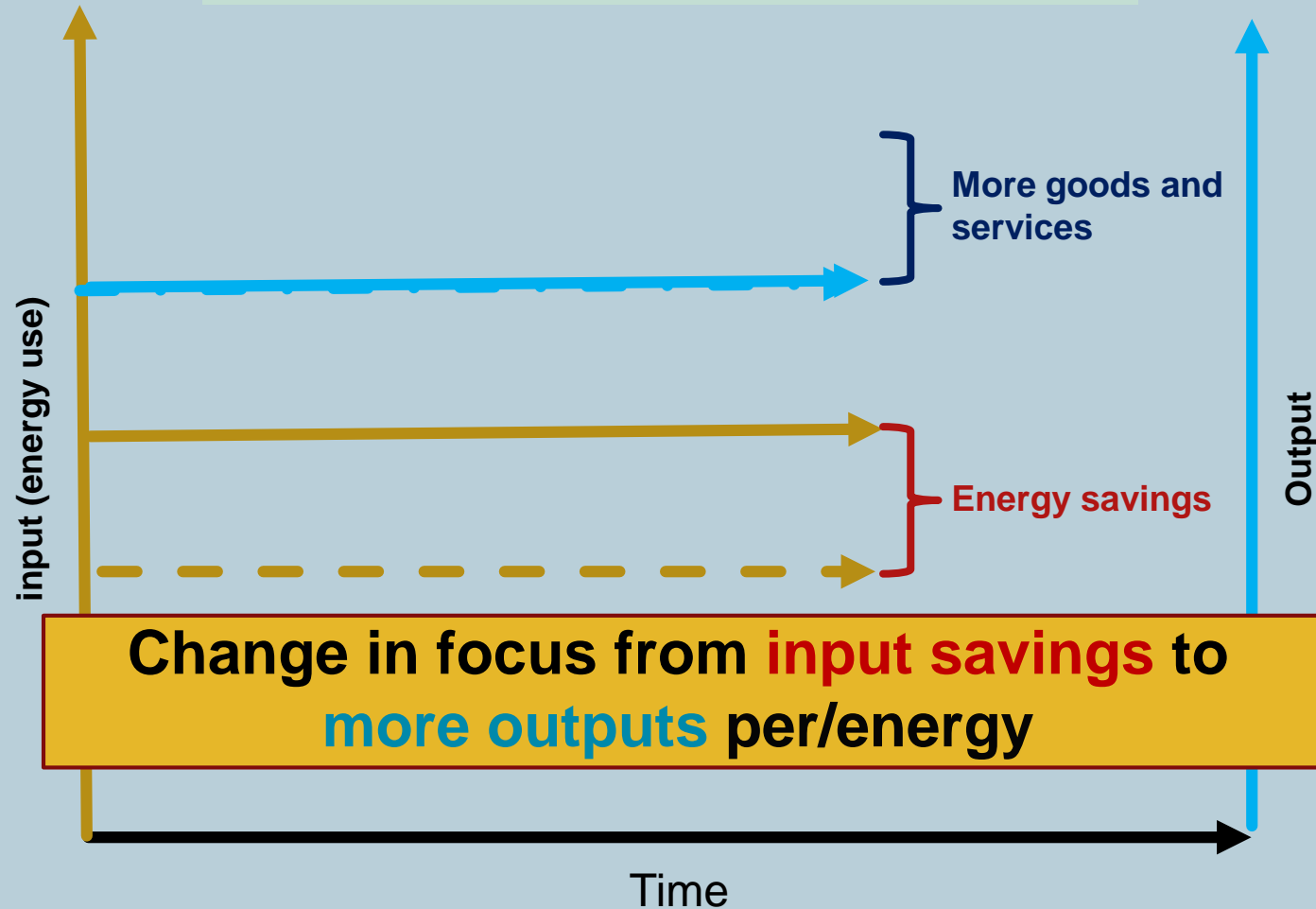
EE:



EE:

‘... more goods and services’

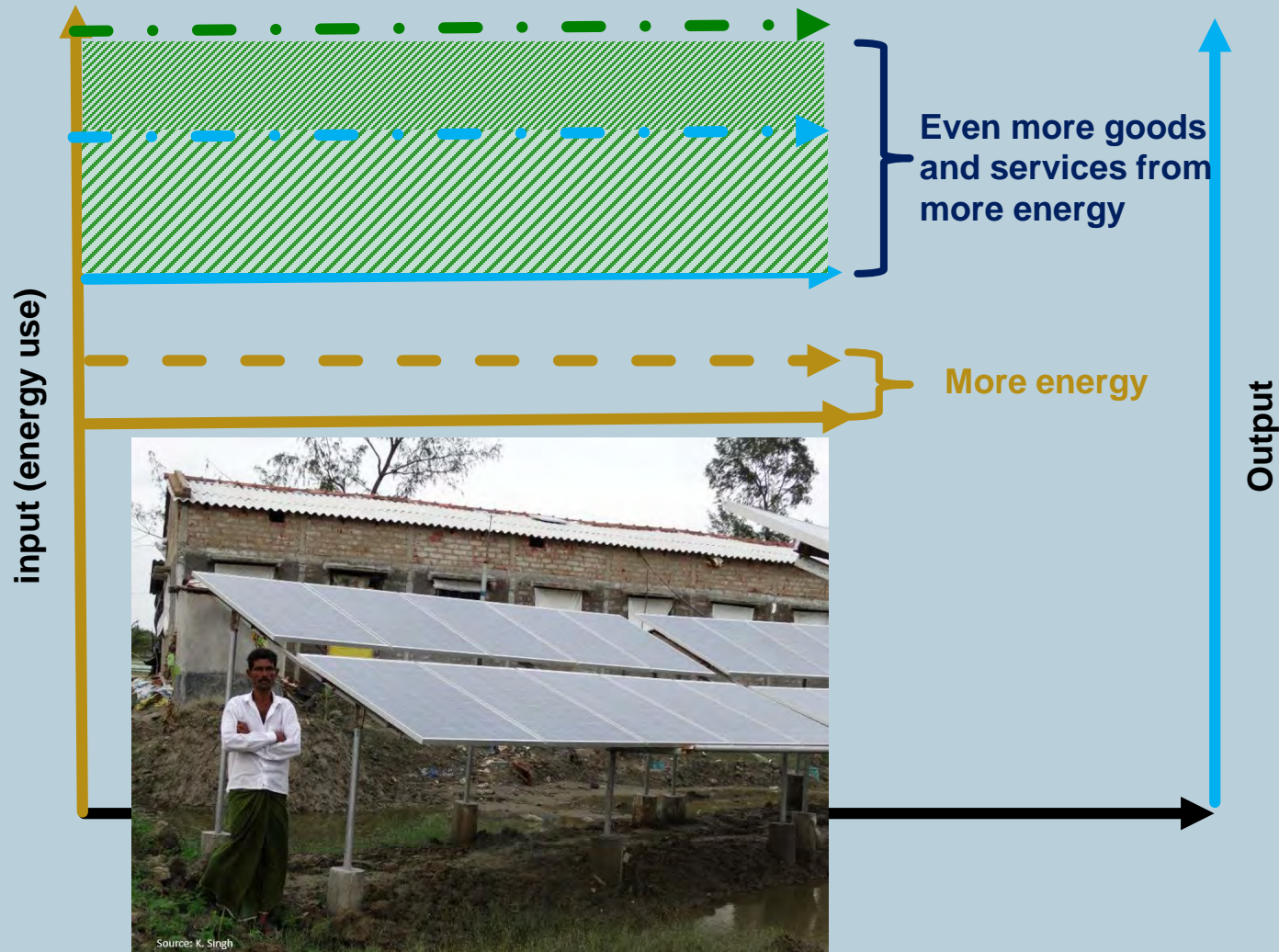
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EE:.....

‘**even** more goods and services
from **more** energy’

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*Promoting EE better in
developing countries
needs shift in the EE paradigm
to 'even more from more'
that increase
standards of living*

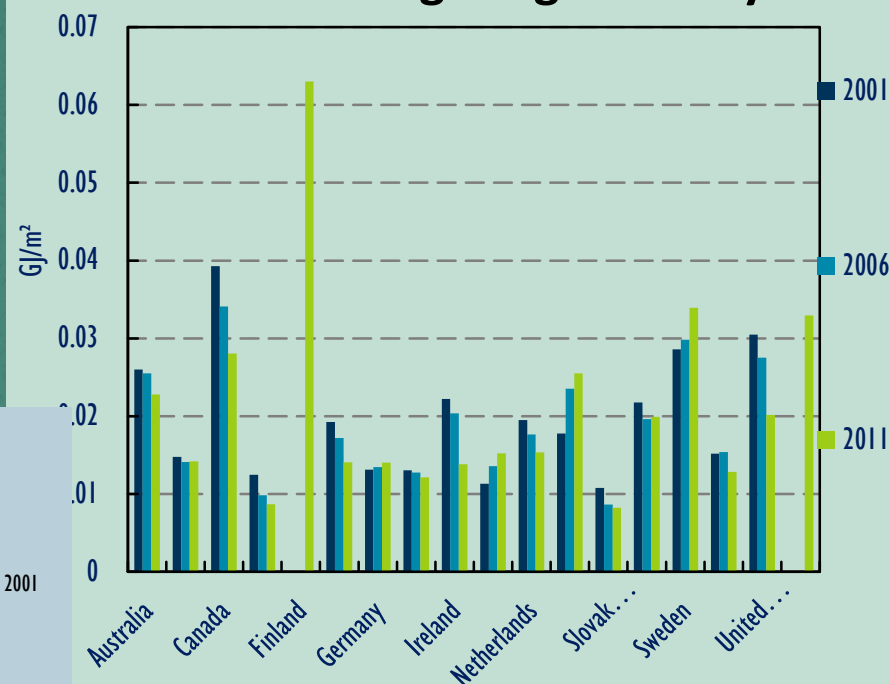
Act 5

*EE methodologies are
ill-adapted to
'even more from more'*

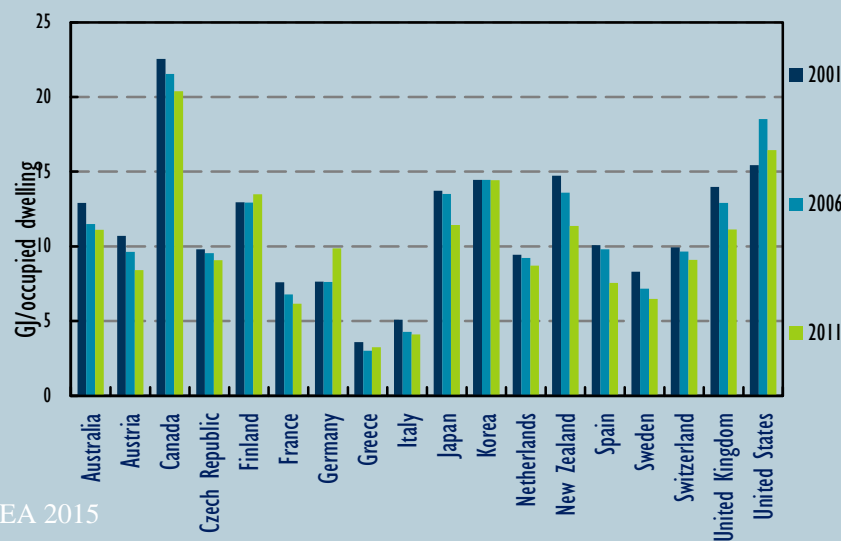
Ill-adapted metrics focus on reductions not additional goods and services



Residential lighting intensity

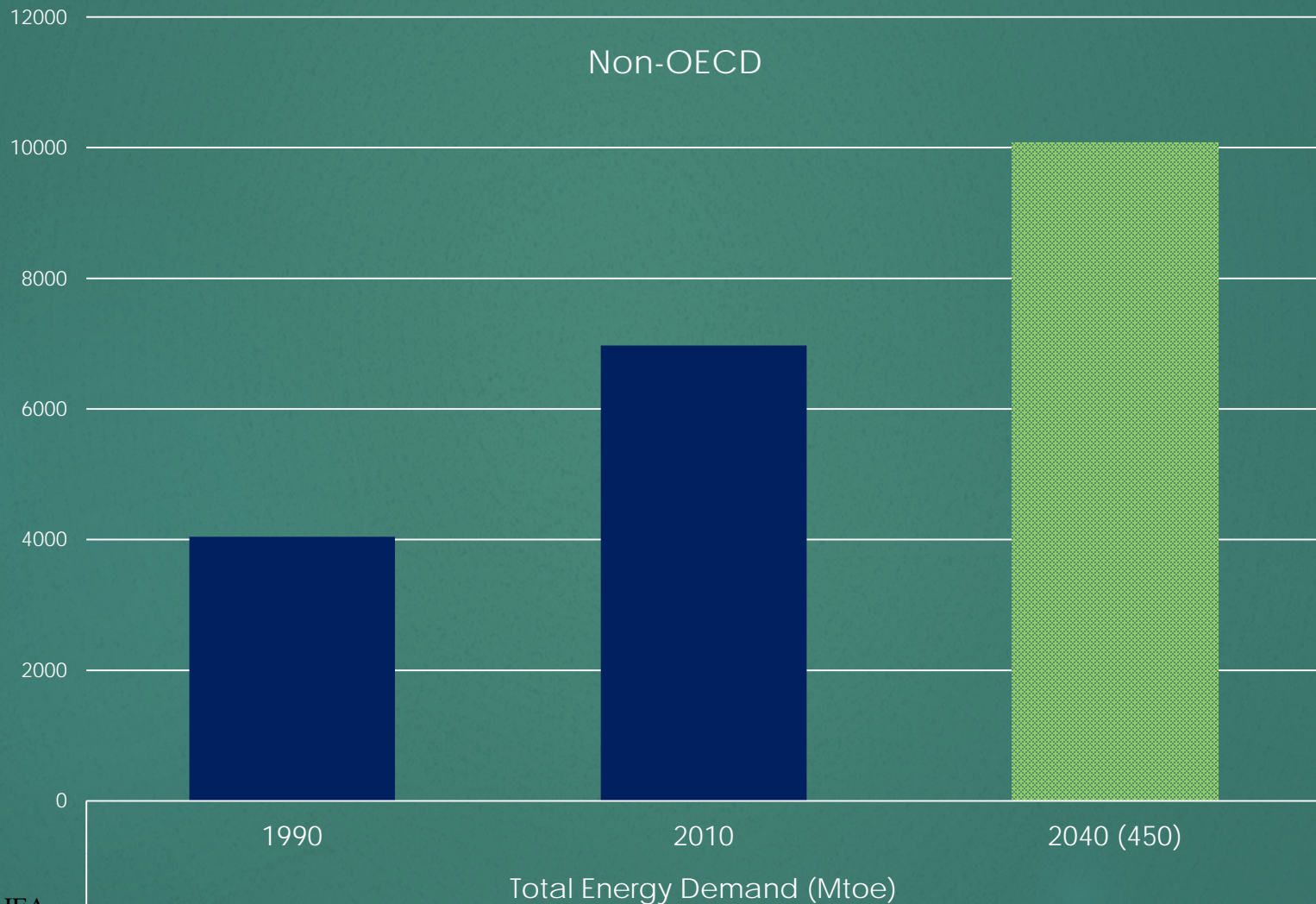


Residential energy intensity of water heating



More energy in developing countries is compatible with the 2 degrees goal

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Source: IEA

From indirect to direct growth impacts

Indirect growth impacts

- *energy savings*
- *more money to spend elsewhere*
- *fiscal balance*
- *lower imports/stronger trade balance*
- *balance of payments*
- *affordability*
- *...*

Direct growth impacts?

- *more goods and services*
- *more AC commercial space (worker productivity)*
- *more freight transport*
- *more street lighting*
- *more health services*
- *more ...*
- **More analysis required**

Energy efficiency delivers the
additional goods and services
that developing and other countries need to
increase prosperity sustainably

Still a work in progress

Thank You

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