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Tax Reform: Core of a Workable Climate Policy

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1. Climate Change

- **Global (energy) economic commons**
- **Lower Energy and Carbon Intensities**

2. Transition to Low Carbon Future

- **Stepwise higher energy price through taxing**

3. Global Agreement on Energy Intensity & Taxing

- **Kyoto stalemate; ETS is not working – never will**
- **Domestic Tax Reform is core of agreement**
- **Transfers & bonuses through Global Climate Fund**



Climate Policy Conditions

- **Commons**
 - **Social coercion (goodwill falls short)**
 - **Efficient coercion (low transaction costs)**
 - **Fair distribution (no windfall profits)**
- **Global**
 - **Coercion engaging the whole World**
- **Economic**
 - **Economic interests and rationality prevail**
- **Energy use is focal**
 - **Today: fraudulent priced, risky energy**
 - **Tomorrow: sustainable (= renewable) energy**



Ehrlich-Holdren Identity

$$\text{CO}_2\text{-emissions} = \text{People} * \text{Affluence} * \text{Energy intensity} * \text{CO}_2\text{ intens}$$

Political:

People ~ culture, traditions, ...

Affluence ~ Self-Interest [hold & aim for more]

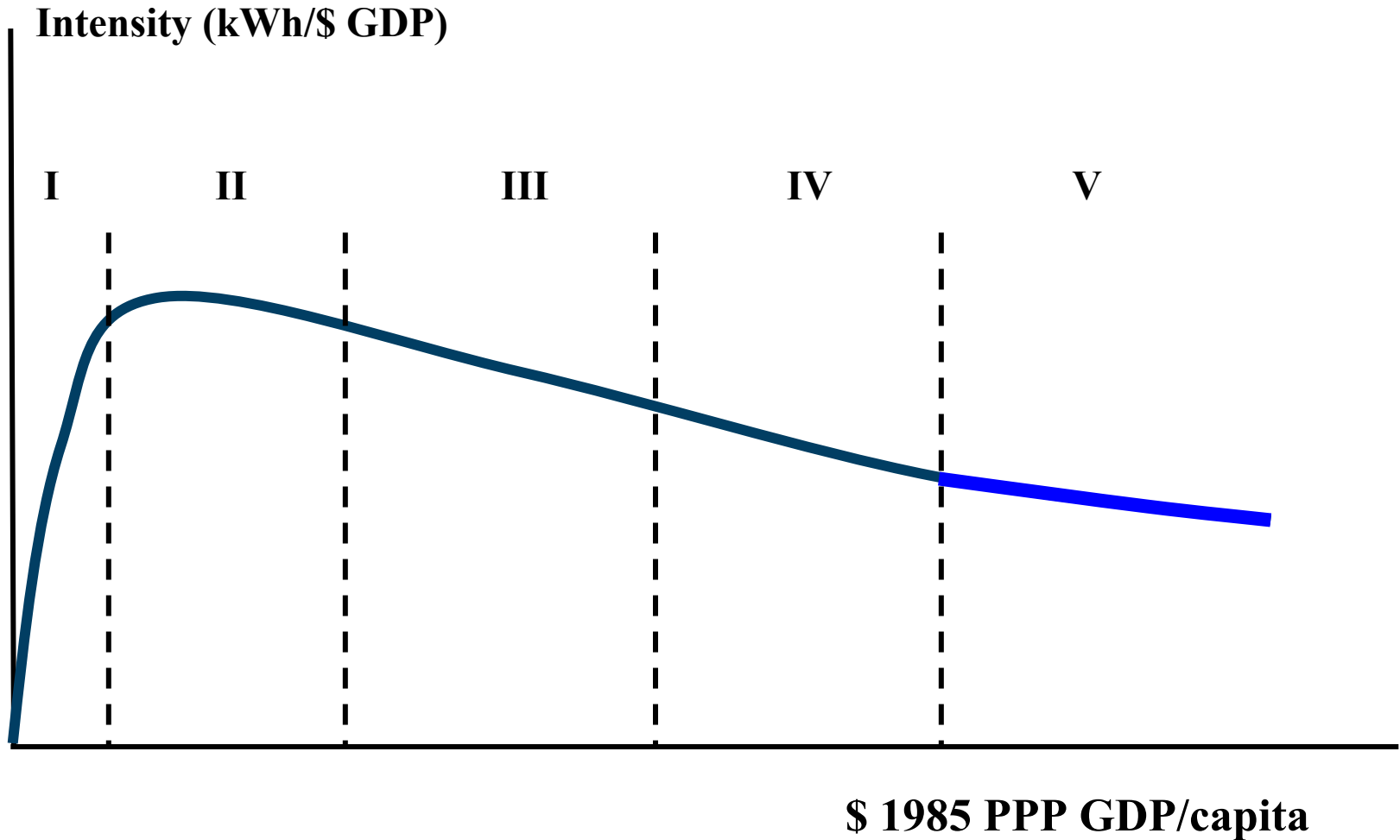
Technical:

Energy Intensity ~ *Efficiency* (4/5) & *Structure* (1/5)

CO₂ Intensity ~ Renewable Energy

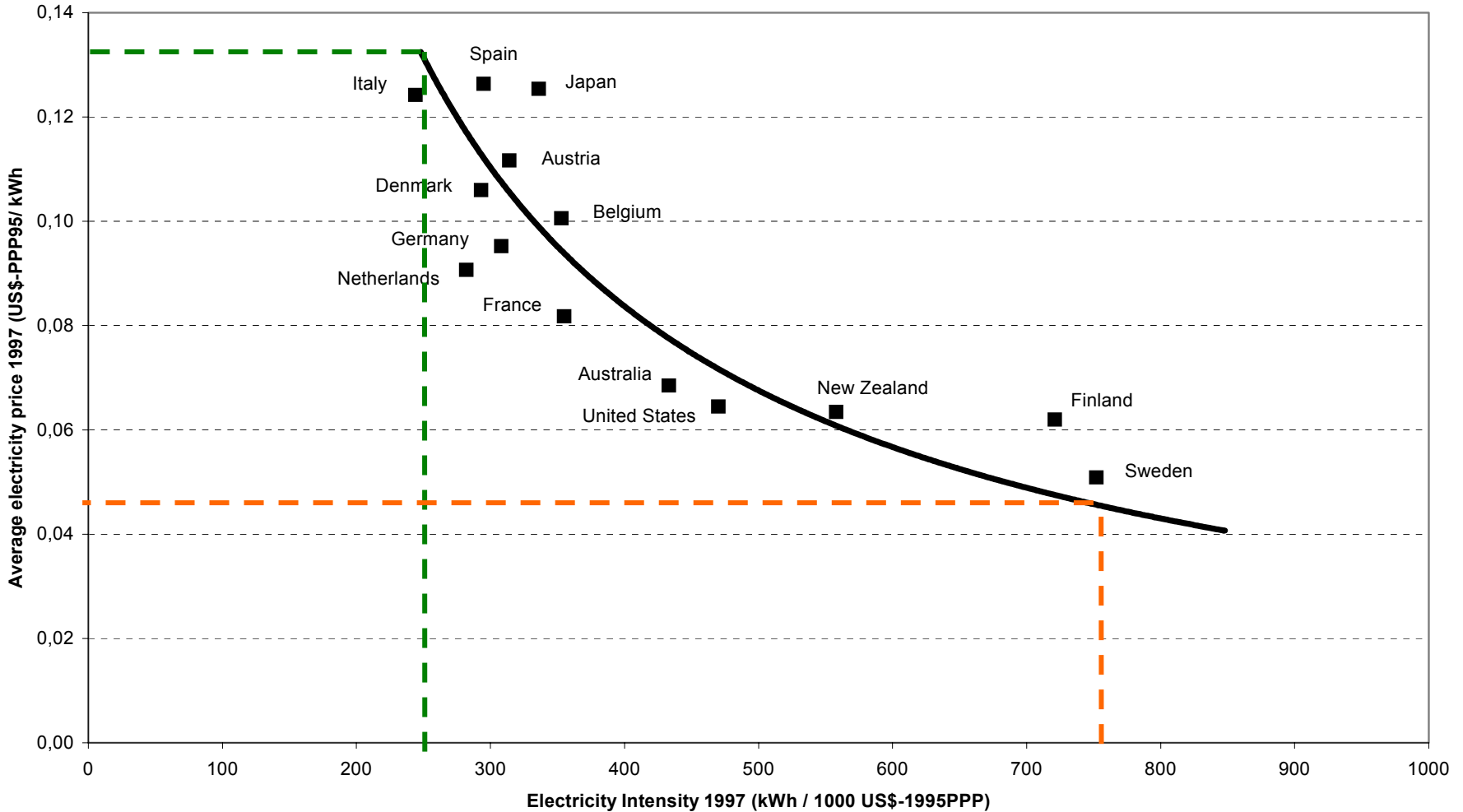


Figure 2: Average Energy Intensity of economies as a function of GDP [Source: Medlock and Soligo, 2001]





Price x Intensity = Constant





- **No permanent, nor overall energy efficiency without high end-use prices**
 - >< **Goal liberalising electricity/gas markets**
 - >< **Emission Trade = free CO2 permits**
 - >< **Twopenny-halfpenny Policies for promoting 'irrational' energy use**
- **High energy prices are NO economic disaster because %GDP spent on energy bills, stays constant**
- **End-use prices are decisive , because households, businesses, etc. strive for 'affordable' (~constant) bills**



Transition to low C-energy

- **Renewable Energy** \Leftrightarrow **Atomic Power**
 - **Atomic power is not sustainable**
- **RE is High-tech**
 - **Rich industrialized world must deliver**
- **RE is Expensive**
 - **Affordable only at LOW-INTENSITY**
 - **I.e.: at HIGH End-use energy prices**



Can we afford Renewable Energy?

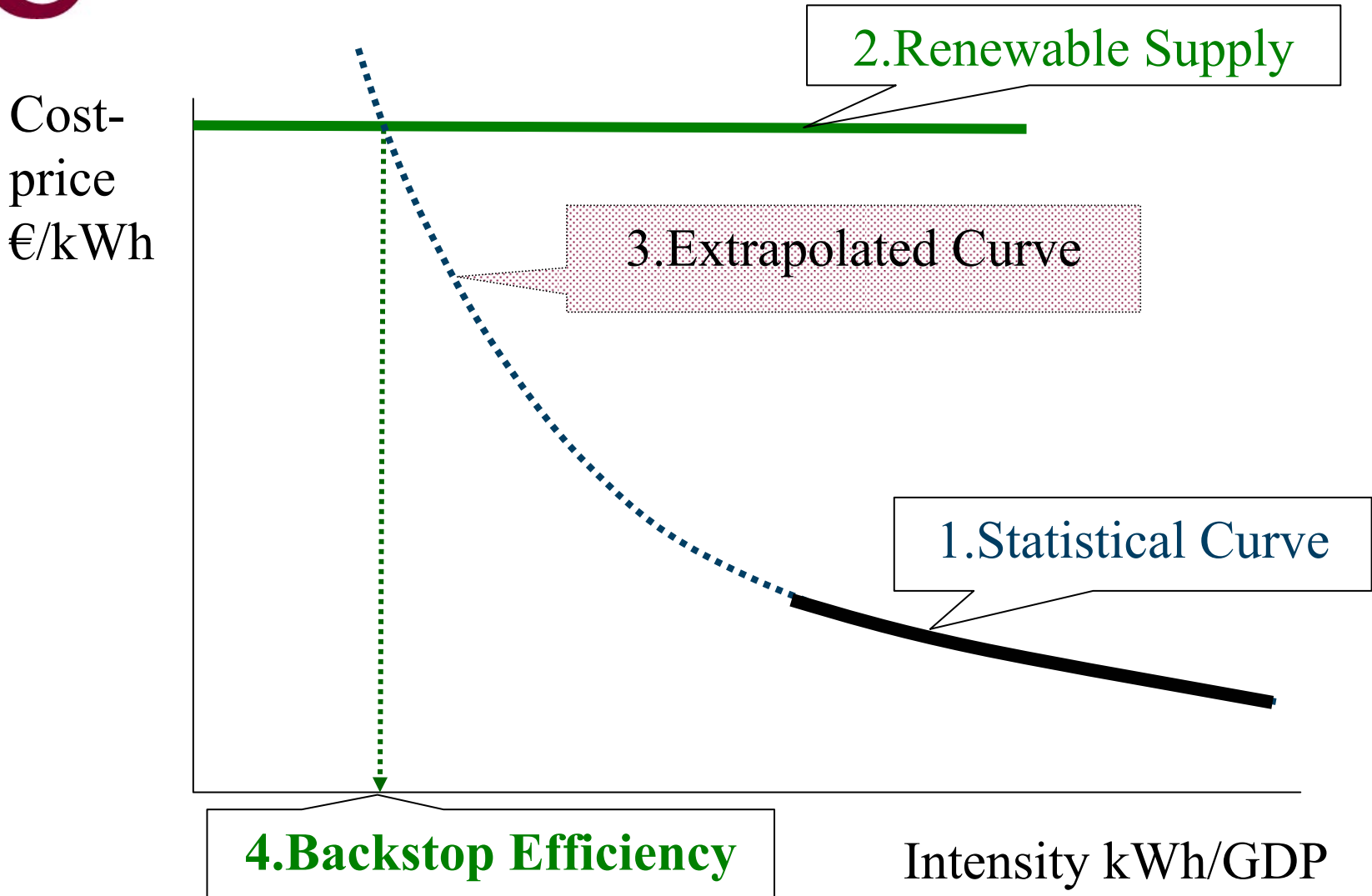
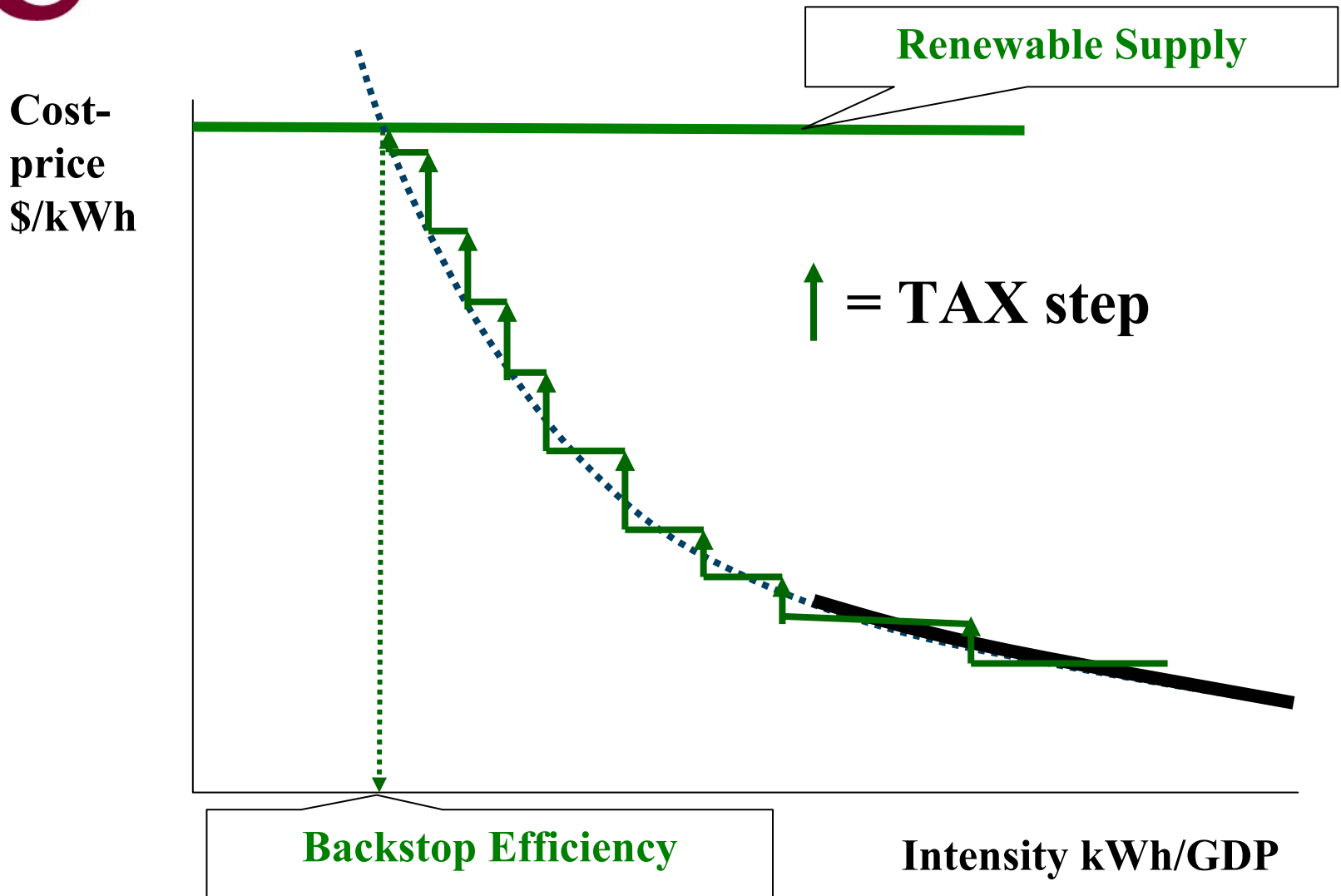




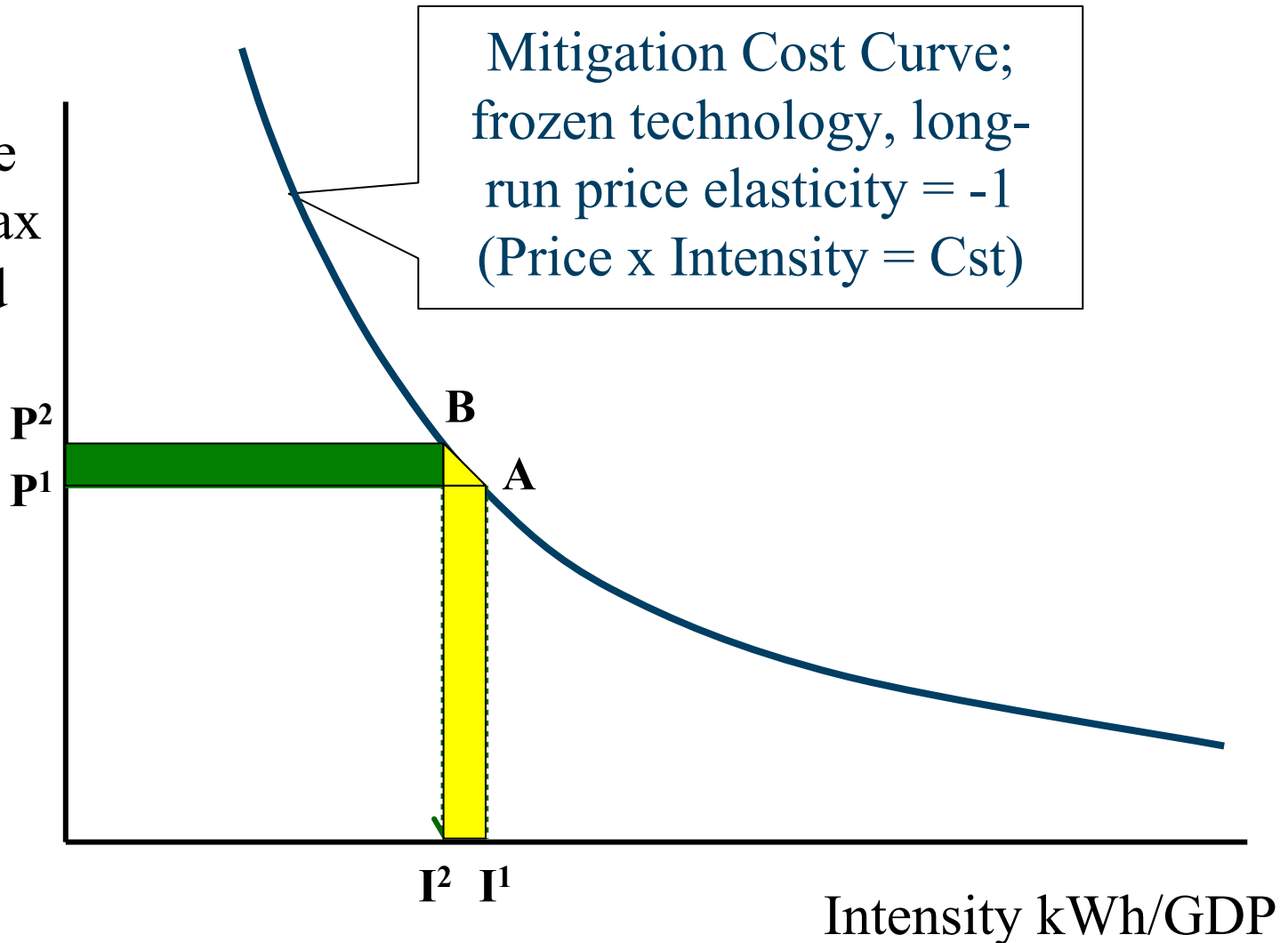
Figure 3: Deep Cuts in Intensities requires a Taxing Stair by Country





Tax return = Efficiency costs

End-use
price, tax
boosted





Global Agreement on Energy Intensity & Taxing (1)

- **All UN members agree upon**
 - **fossil fuel and grid electricity end-use intensity reduction**
 - **tax reform to trigger and maintain such reduction**
- **Levelling the playing field for**
 - **the transition to a full renewable energy supply**



Global Agreement on Energy Intensity & Taxing (2)

- **Wealthiest UN members commit to money and technology transfers to a Global Climate Fund**
 - **According to income and compliance levels**
- **Less wealthy and poor UN members receive drawing rights on the GCF as a bonus**
 - **According to income and compliance levels**



Figure 5: Wealthiest Countries: climate tax revenues regulation for recycling / transfers to the Global Climate Fund, including incentives for good commitment and good compliance

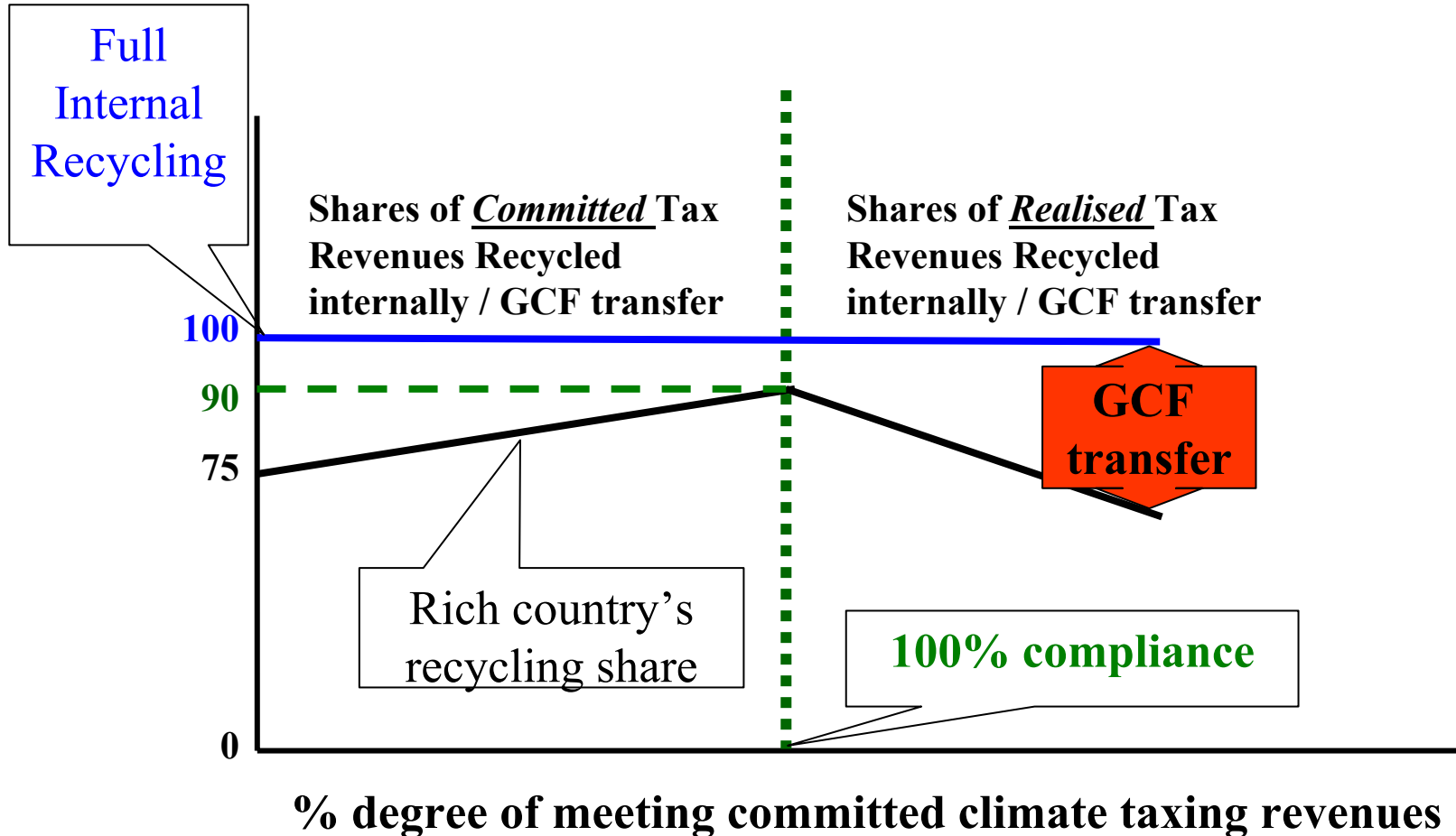
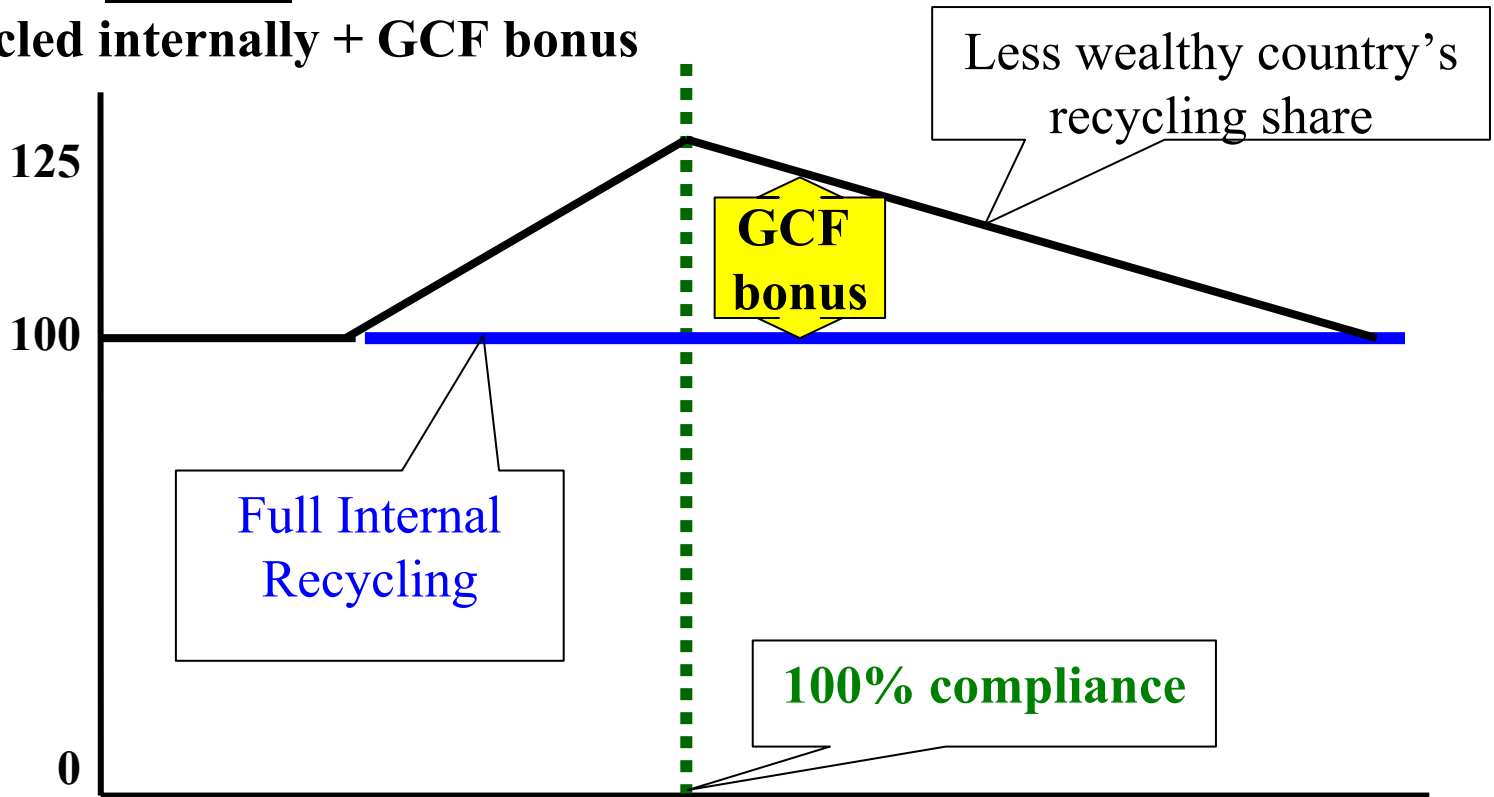




Figure 6: Less Wealthy Countries: climate tax revenues regulation for recycling + bonus from the Global Carbon Fund, including incentives for good commitment and good compliance

**Shares of *Realised* Tax Revenues
Recycled internally + GCF bonus**



% degree of meeting committed climate taxing revenues



Concluding:

Tax reform is core of a workable climate policy:

- **Triggers and maintains fossil fuel and grid electricity intensity reductions**
- **... so making the transition to a full renewable energy future affordable**
- **... the only way to solve the climate problem**

Tax reform is a country's duty and right

- **Monitored by UN (or delegated) authorities**
- **Tax reform performance governs transfers & bonuses with the Global Climate Fund**