Grim Realists: Yesterday’s Reality

Our recommendations

• Start acting: **20 years ago**!

• Extreme **Performance Standard: 50%**
  – No subsidy/tax on carbon producers: near ZERO effect
  – No separate emission tax

• Massive **subsidies (200%)** for **Nuke/Bio/Green** energy

• Obscene **reduction (40%)** of **Other Gases** thru policy req

• Accelerated retirement: **5%**

• Pray.

2100 Temperature Increase = **2.8 degrees**
RG-III
Innovative and Sustainable

- Energy Mix 80% non-carbon by 2100
- 90% reduction in other greenhouse gas emissions by 2100
- Carbon Tax: $70/t starting 2012
- Continued GPP growth
  - 3.5% short term
  - 1% long term
- Synergistic health and quality of life gains

Mean global temperature increase 2000-2100: 2.1°C
Op2.2mistic: Efficiency, performance, subsidies

Our recommendations

- **Energy efficiency**: 0.05
- **Renewable breakthrough**: 0.5 starting in 2020
- **Performance Standard**: 45 starting in 2018
- **Subsidy reductions**: -2 starting in 2014
- **Land use**:
  - REDD – 0.9
  - Other gases – 0.9

2100 Temperature increase = 2.2 degrees C
Int’l Energy Court: Reward the Good and Punish the Bad

Our recommendations:

1. “Other gases” and “REDD” to 1.
2. “Improve... rate of capital” to 0.07.
3. “Carbon tax” to $50 (over 20 years).
4. “Performance Standard” to 60.
5. “Subsidy or Price” to -5 for oil, coal and +5 for renewables.
6. “Accelerated retirement” for coal to 0.06.
ReVIVE: Renewable energy, Vehicles, Incentives, Value Carbon, Efficiency

Our recommendations

• **Renewable Energy**
  – Breakthrough 0.6, 2020

• **Vehicles**
  – Price on oil -5, starting 2012

• **Incentives**
  – Subsidize RE by 5, starting 2012

• **Value Carbon**
  – Emissions price $50/ton CO₂ beginning 2012

• **Efficiency**
  – Efficiency Improvement 0.06

2100 Temperature Increase = 2.4°
Team Panda Express: Taxes, Timing, and Gas

Our recommendations:

- Carbon Tax of $100 integrated over 40 years
- Performance standard of 20 beginning in 2018
- Annual Improvement Rate of New Capital: 5%
- Other Gases: 0.6
- Price on Gas: -5 beginning in 2040 but w/ 0.2 Breakout Cost Reduction (BCR) in 2012 (Fracking)
- Nuclear Subsidy: $3 per GJ for 30 yrs starting in 2012
- Nuclear BCR: 0.4 in 2050
- Renewable Subsidy: $5 per GJ until 2060 and BCR of 0.3 in 2040

2100 Temperature Increase = 2.4° C