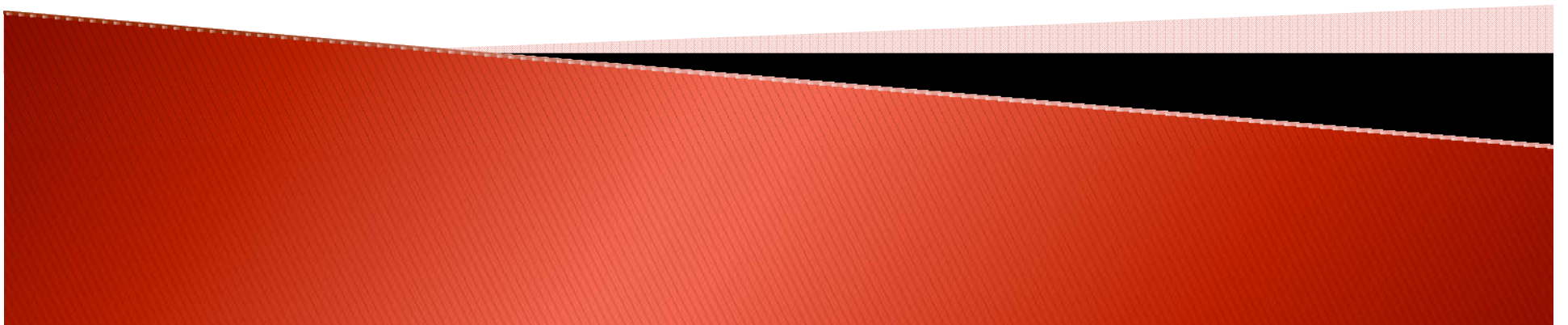


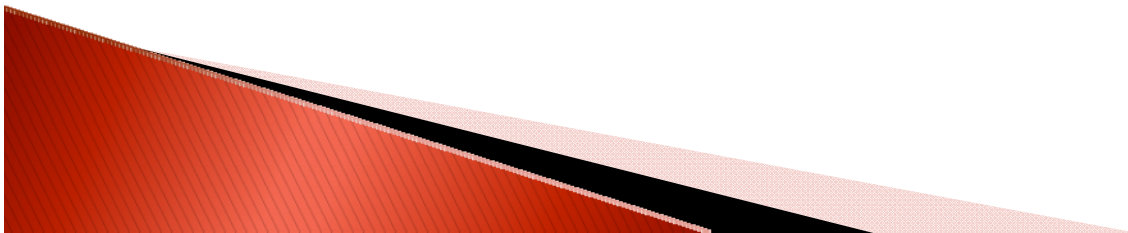
Pursuing SLFC Controls

Catherine Witherspoon
Consultant to the ClimateWorks Foundation



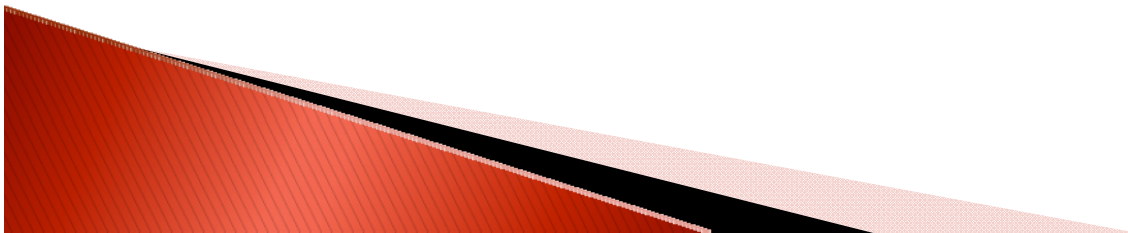
The Key Question

- ▶ There is increasingly strong evidence of black carbon's impact on climate
- ▶ There are ample intervention opportunities
- ▶ Why aren't the nations of the world responding to this unique threat?



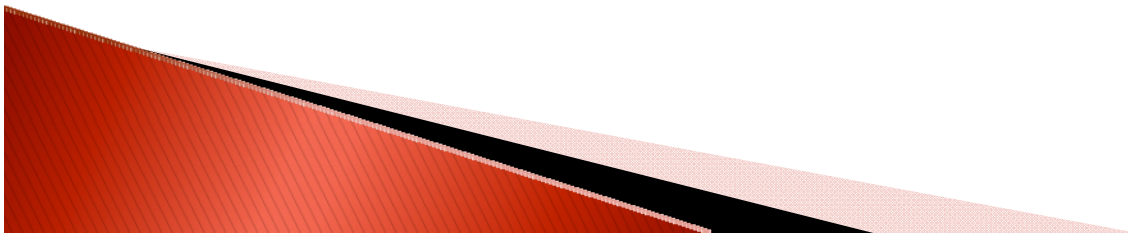
Personal Bias

- ▶ Action is always better than inaction
- ▶ Early intervention is more effective than late
- ▶ Uncertainty demands extra caution but should not be a barrier to getting started



Huge Caveat

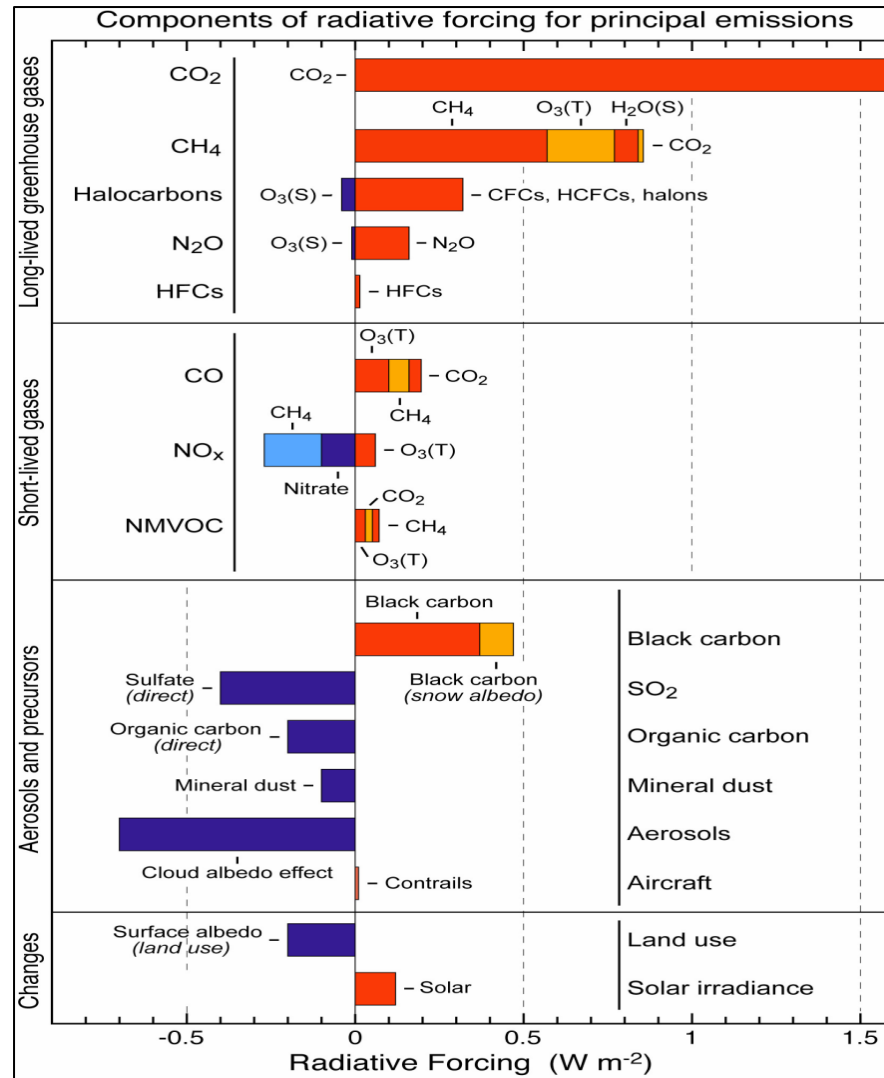
- ▶ Solid emission inventory is crucial, particularly where BC emissions are largest
- ▶ Also need to know control measure effectiveness
- ▶ For climate and health impacts, correct direction is sufficient



What We've Been Trying
to Get Across...

SLCFs Matter as Much as CO2

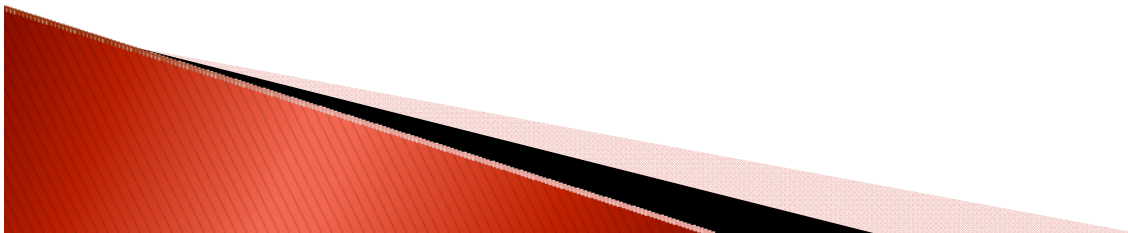
Source: IPCC AR-4, Working Group 1, Figure 2.21, based on emissions since the Industrial Revolution (1750).



BC Poses Unique Threat



BC responsible for 50% or nearly 1.0°C of the 1.9°C temperature increase in the Arctic from 1890 to 2007 (Shindell, Faluvegi 2009)



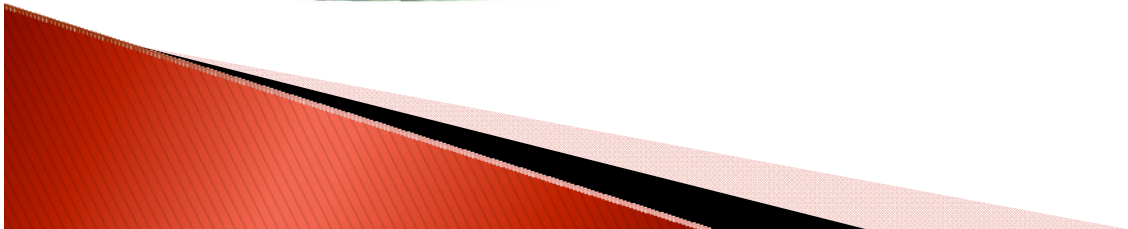
Two Baskets Needed



- ▶ Immediate reduction of SLCFs to slow warming & melting



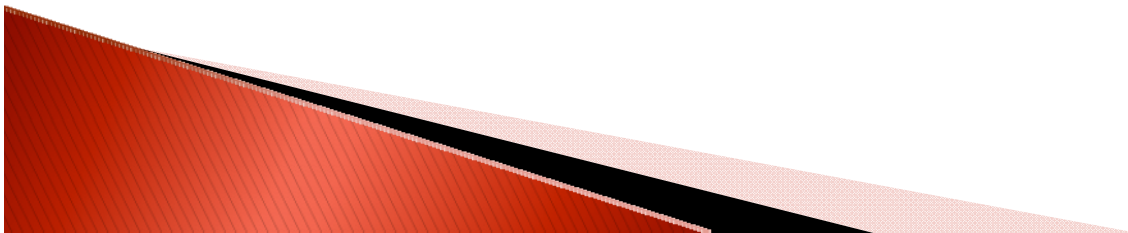
- ▶ Continuous transformation to low carbon economy to save the planet



What We Have
(Painfully) Learned...

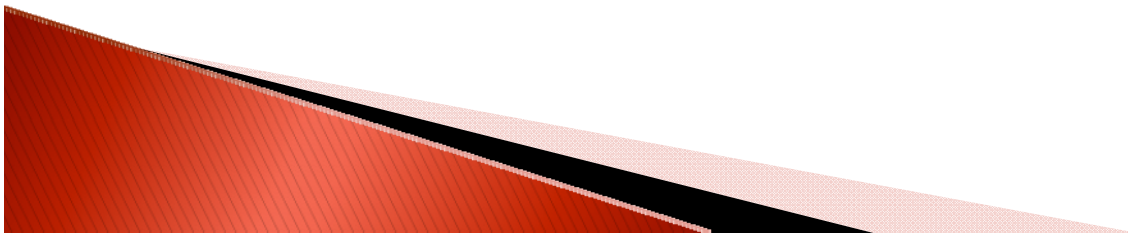
Contradictory Signals

- ▶ Public concern about climate change declining worldwide
- ▶ Public support for regulations still strong
- ▶ “Take care of it and leave us alone”



National & Individual Self Interest

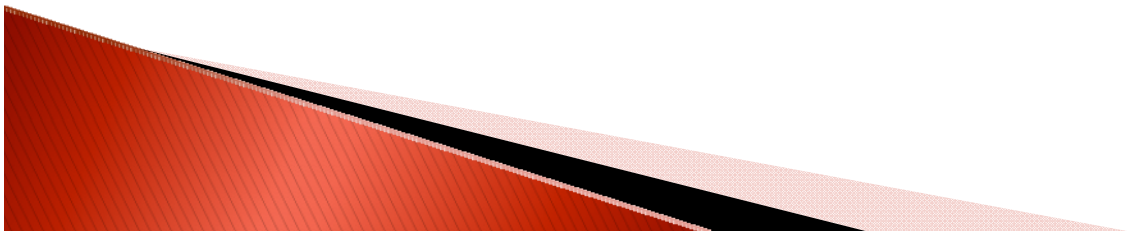
- ▶ COP-15 Experience: What nations do depends on their self interest
- ▶ NPR Story: What individuals believe/do depends on their values and world view
- ▶ These are the real “inconvenient truths”



\$\$ Proxies for Self Interest

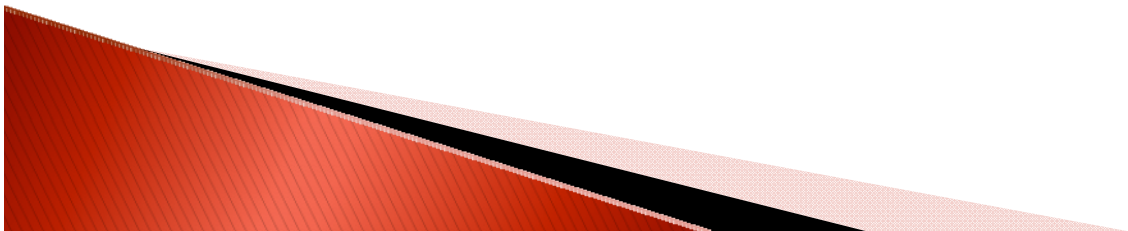
Nations Will Pay For...

- ▶ Self Defense
- ▶ Energy Security
- ▶ Economic Development
- ▶ Public Health & Safety
- ▶ Higher Quality of Life



Individuals Value...

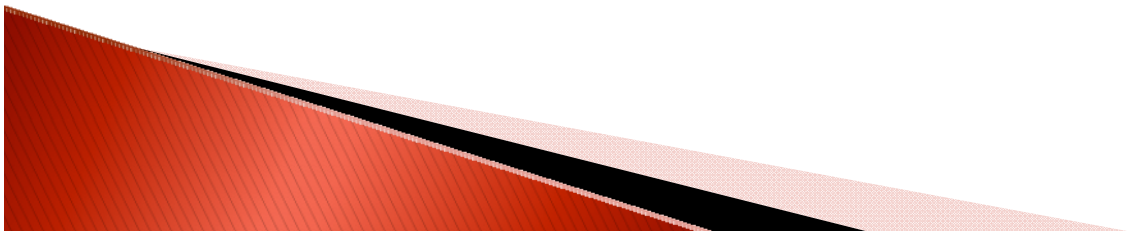
- ▶ Pristine Views
- ▶ Reduced External Risks
- ▶ Longer Lifetimes
- ▶ Reduced Suffering
- ▶ Personal Freedom



So What Should
Concerned Parties Do?

Ideal Situation

- ▶ Sweeping mandate(s) adopted
- ▶ Technical experts refine and implement
- ▶ Periodic evaluation and revision



Until That Day Arrives...

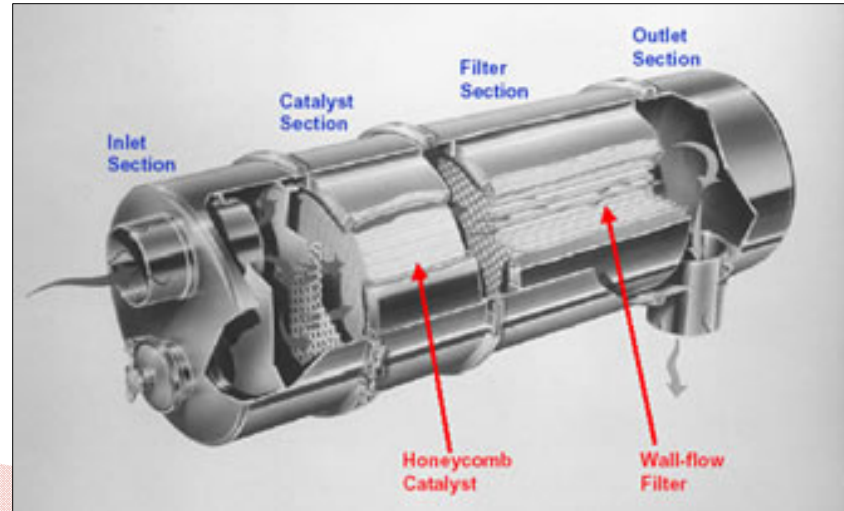
Identify & Stress Co-Benefits

- ▶ Public health protection is single biggest draw, worldwide
- ▶ Economic savings tie for second
- ▶ Positive climate feedbacks bring up the rear



Apply Technology First

- ▶ Respects “leave me alone” predisposition
- ▶ Has demonstrated track record of success
- ▶ Prompts economic development



Use Taxes, Subsidies and/or Bans Where Technology Cannot Reach

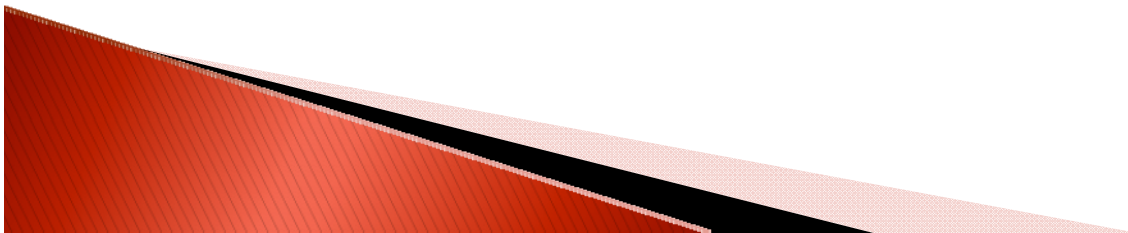
Examples:

- ▶ Ban 2-strokes engines in favor of 4-strokes
- ▶ Subsidize stove replacement in third world
- ▶ Tax continued use of high sulfur fuels

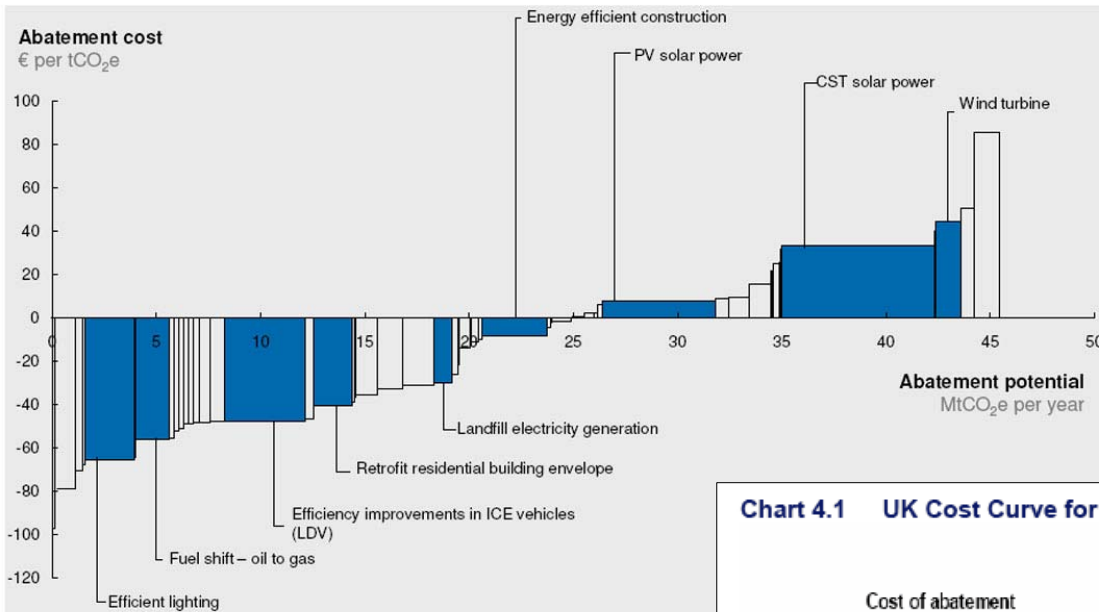


Integrate AQ & CC Planning

- ▶ For each nation, there is an optimum investment path
- ▶ Individual cost curves highlight the choices
- ▶ Air quality and climate modeling can isolate best final package

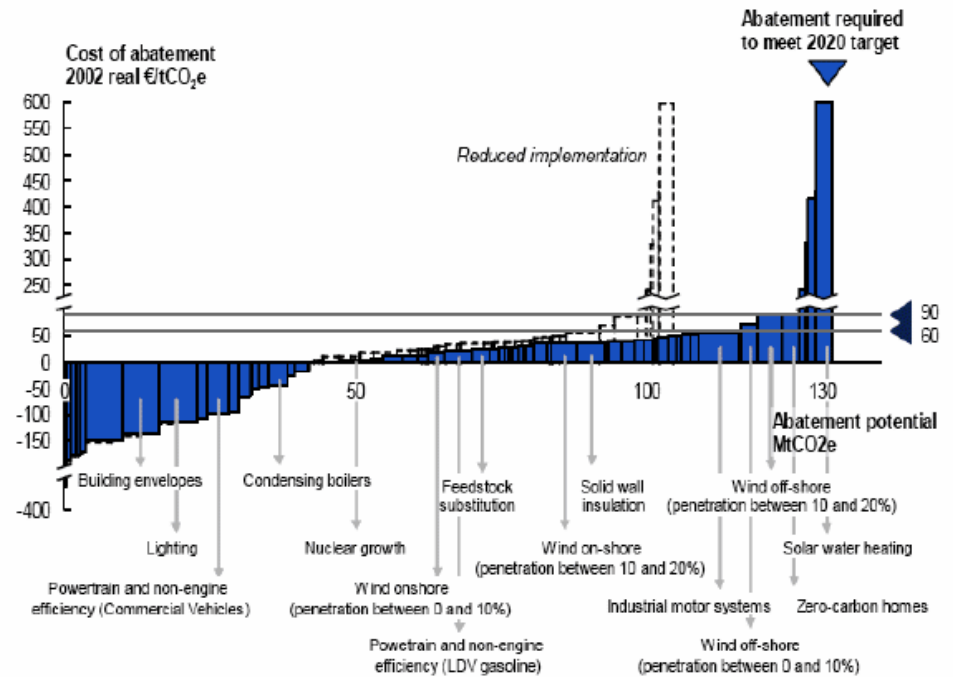


Israeli GHG Abatement cost curve, 2030



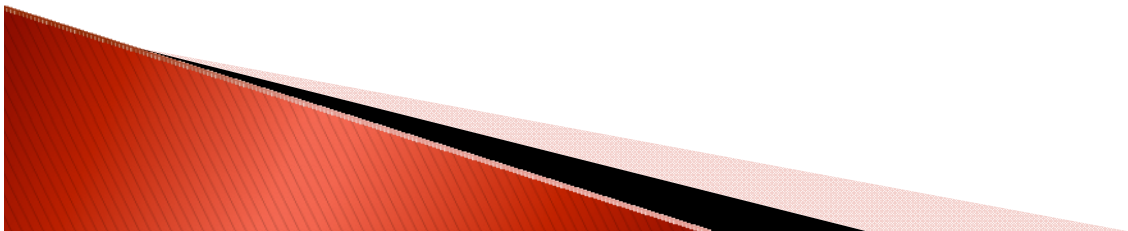
Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures to be pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.

Chart 4.1 UK Cost Curve for Measures to Reduce Greenhouse Gas Emissions



ClimateWorks Approach

- ▶ National low carbon development plans
- ▶ Nationally appropriate mitigation measures (NAMAs)
- ▶ Air quality overlay
- ▶ Economic modeling by Global Green Growth Institute (3GI) in South Korea



Conclusion

- ▶ Not where we expected to be, but undeniably where we are starting from
- ▶ Significant opportunity to save lives and reduce climate impacts if we keep self interests in mind at all times

