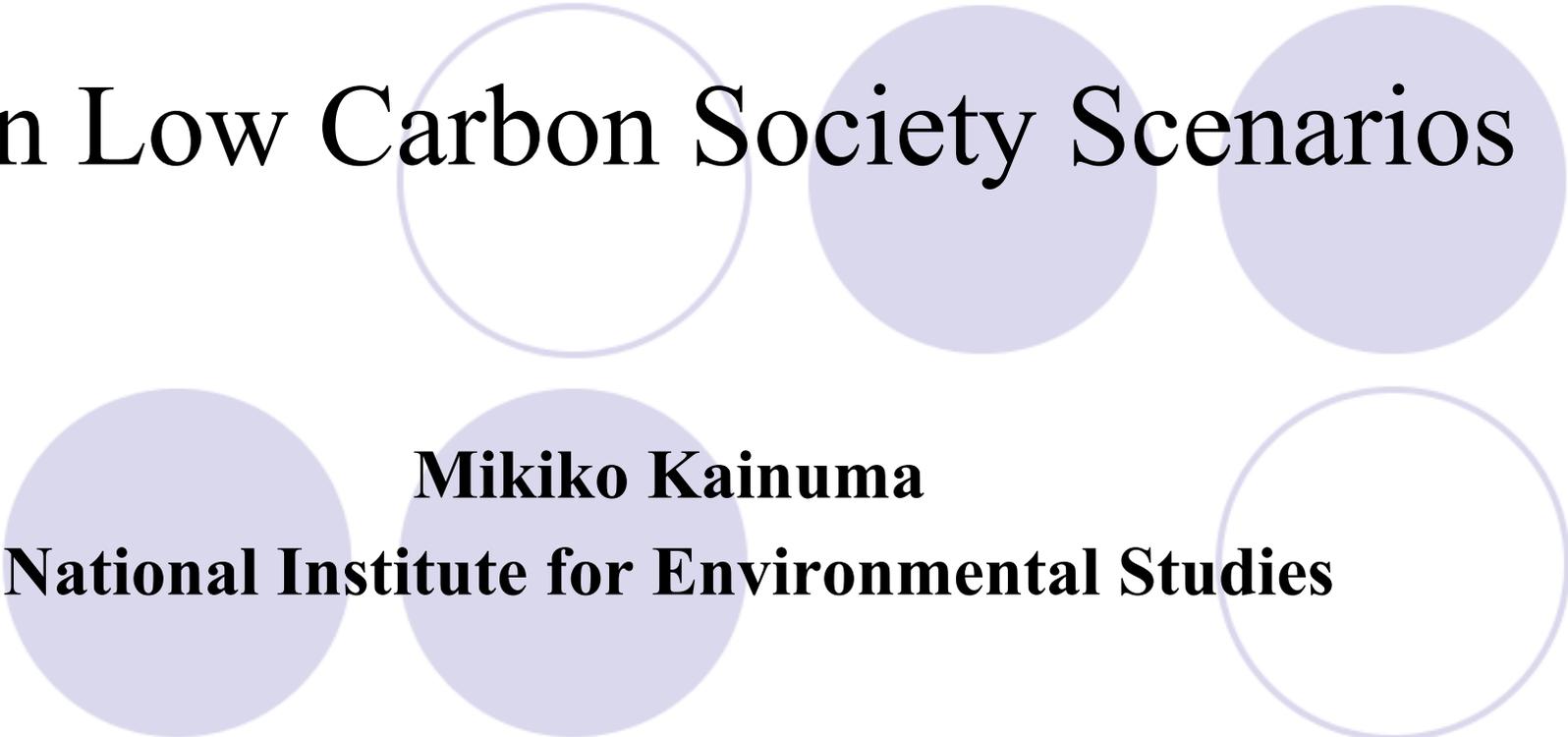


Japan Low Carbon Society Scenarios



Mikiko Kainuma

National Institute for Environmental Studies

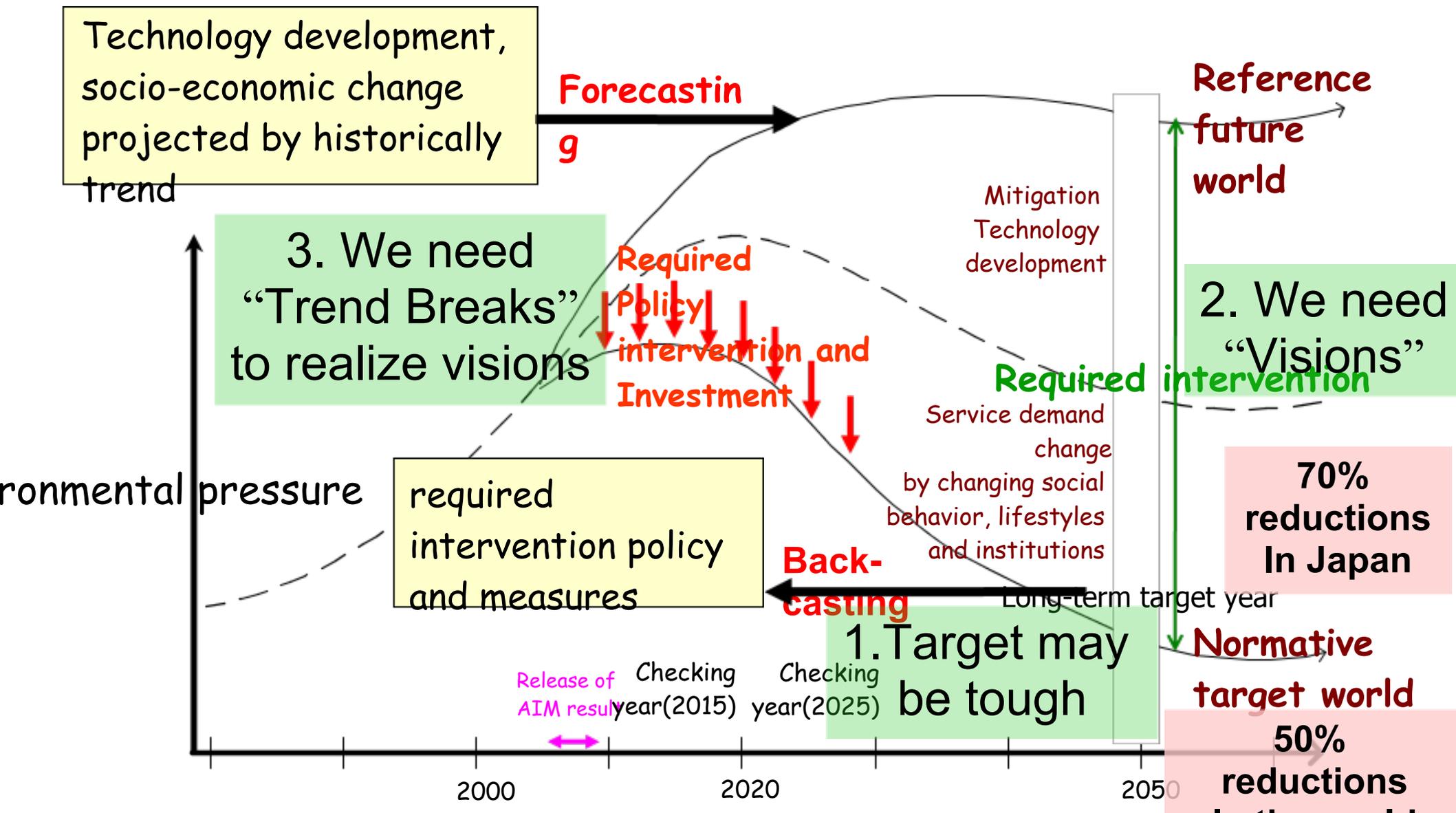
Integrated Assessment Modeling Consortium

22-23 September 2008

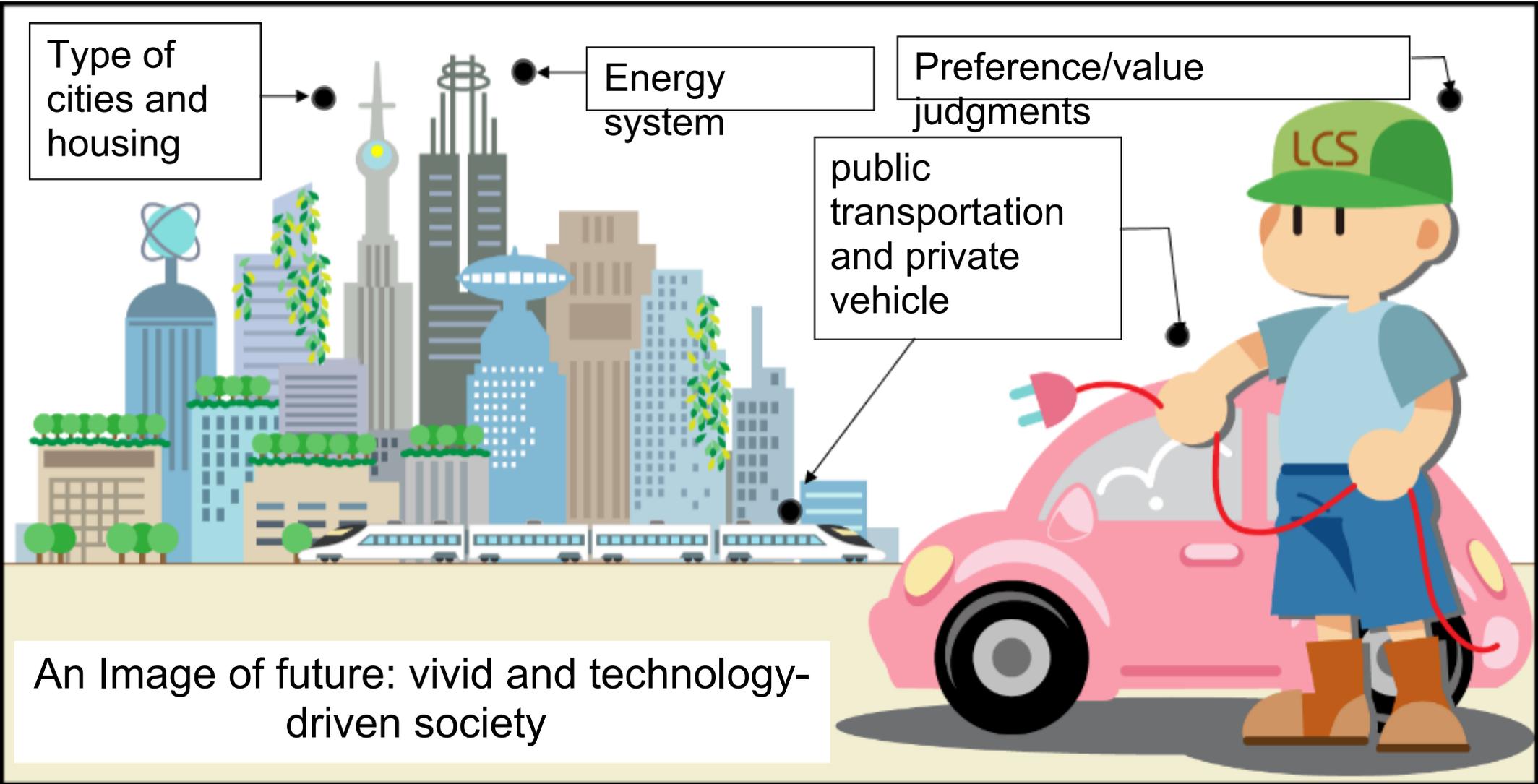
Vienna, Austria

A Low-Carbon project

Forecasting from now and Backcasting from future prescribed/normative world



Creation of narrative storylines of future Low Carbon Societies: Image A

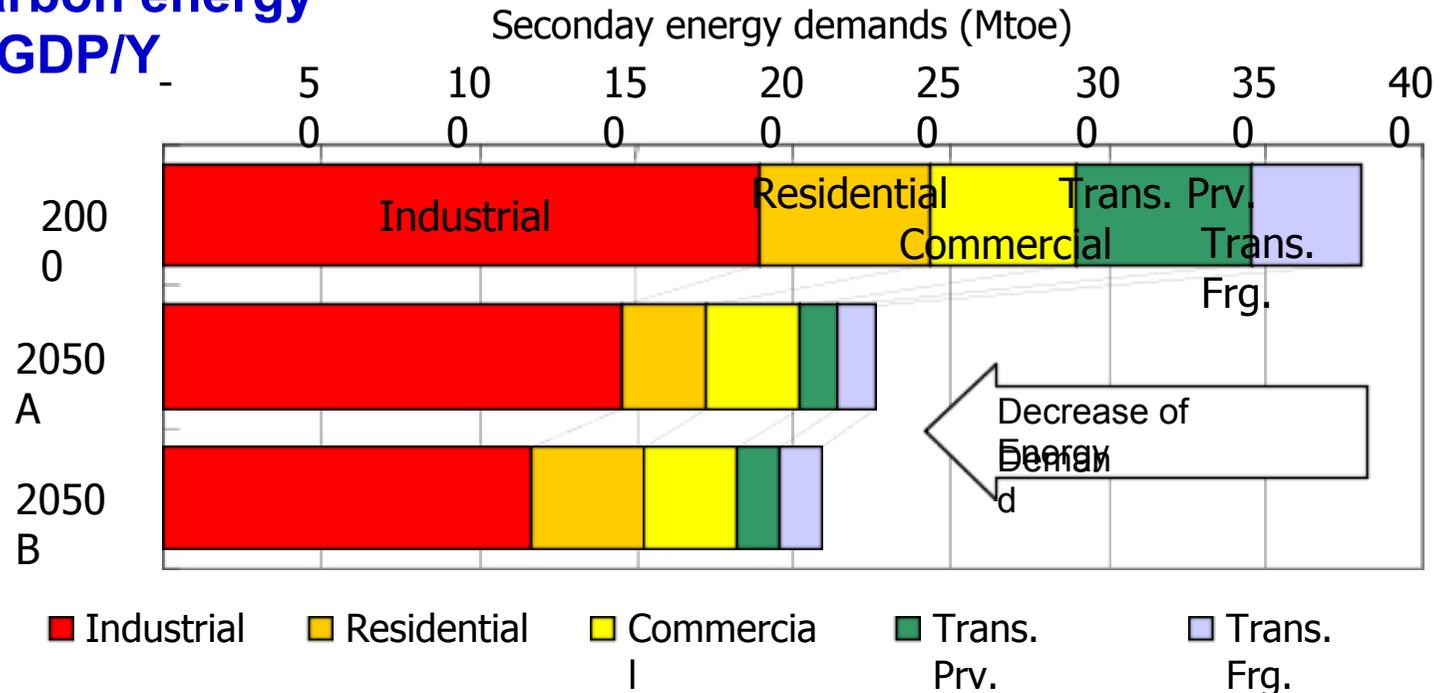


**70% reduction feasible in Japan:
Combination of demand side energy
reduction + low carbon energy
Direct cost: 1% of GDP/Y**

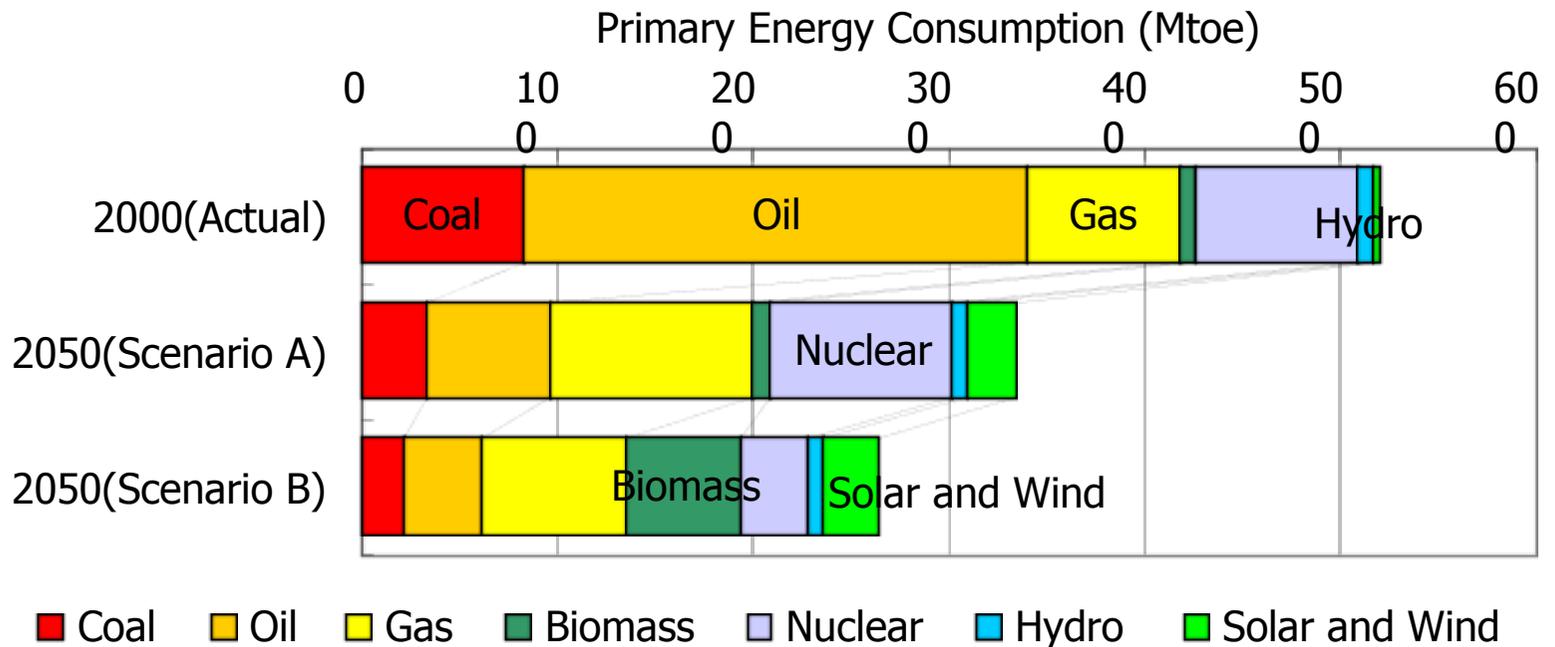


**“But it is not realized without
suitable policies”**

Final energy
demands



Primary
energy
supply



A Dozen of Actions towards Low-Carbon Societies

	Name of Action	Explanation	Expected CO ₂ reductions
1	Comfortable and Green Built Environment	Efficiently use of sunlight and energy	Residential sector:
2	Anytime, Anywhere	Initial cost reduction by rental system	56~48 MtC
	Appropriate Appliances	for promoting Top Runner appliances.	
3	Promoting Seasonal Local Food	Supply of seasonal and safe low carbon local foods for local cuisine	Industrial sector:
4	Sustainable Building Materials	Using local and renewable buildings materials and products.	30~35 MtC
5	Environmentally Enlightened Business and Industry	Businesses aiming at creating and operating in low carbon market.	
6	Swift and Smooth Logistics	Networking seamless logistics systems with supply chain management.	Transportation sector:
7	Pedestrian Friendly City Design	City designed for short trips and efficient public transport	44~45 MtC
8	Low-Carbon Electricity	Large-scale renewables, nuclear power and CCS-equipped fired plants	Energy conversion sector:
9	Local Renewable Resources for Local Demand	Enhancing local renewables use, such as solar, wind, biomass and others.	95~81 MtC
10	Next Generation Fuels	Carbon free hydrogen- and/or biomass-based energy supply system	
11	Labeling to Encourage Smart and rational Choices	Information for smart choices of low carbon goods and	Cross-sectional
12	Low Carbon Society Leadership	Human resource development for building "Low-Carbon Society"	

The reductions in each sector are based on Scenario A and Scenario B, respectively.

- Deep cut of GHG emissions could be possible, but it requires strong policy will to make it happen.
- To examine when and how innovations should be implemented is indispensable to realize Low Carbon Society.
- Mid-term national scale integrated assessment models could support:
 - Creating concrete image of future world and policy targets
 - Backcasting from the future world and identifying required policy intervention and investments

