

A horizontal banner composed of five square images: a blue sky with white clouds, a person in a yellow shirt climbing a rope, a map of Asia with glowing blue lines, a green mountain landscape, and a white wind turbine against a blue sky.

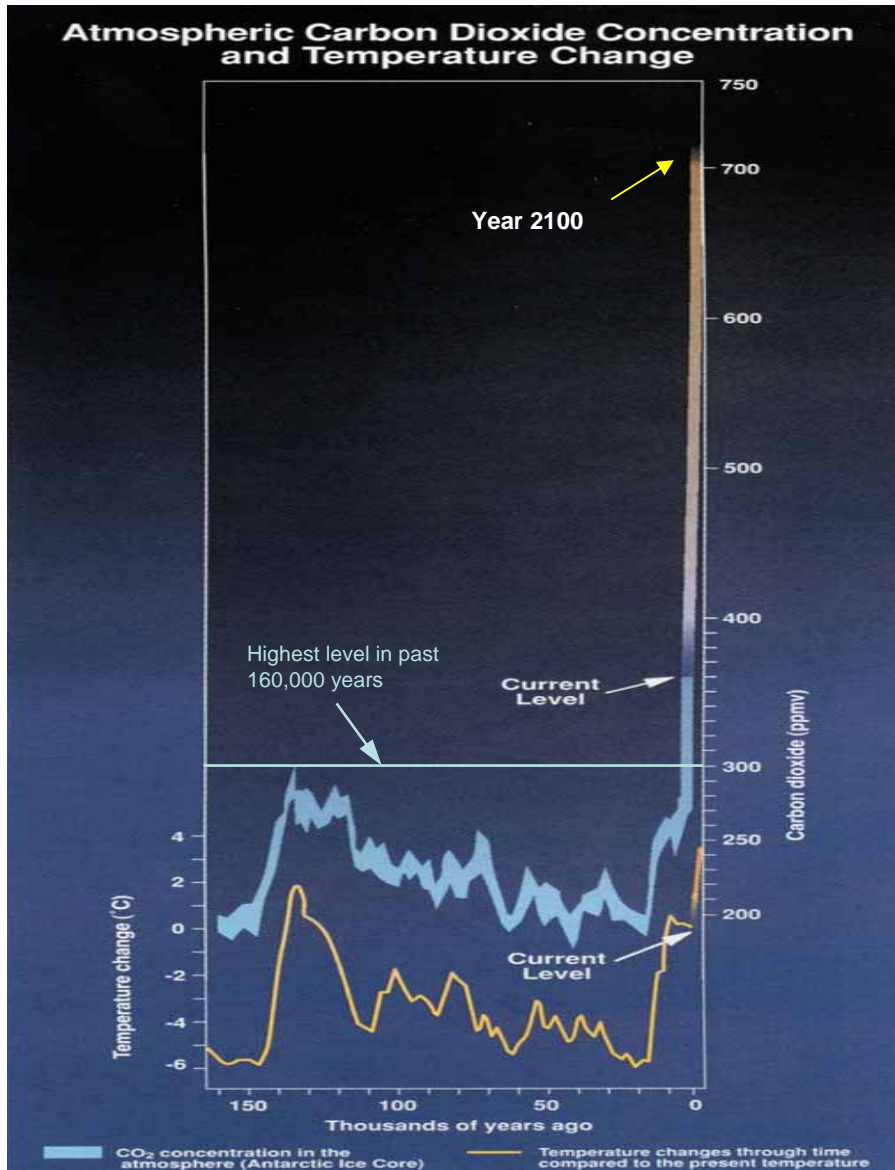
# Asia on the Copenhagen

## “Setting the Stage”

**Josh Carmody**

OECD-ESCAP Regional Conference on Corporate Responsibility.  
“Why Responsible Business Conduct Matters”, Nov 2-3 2009



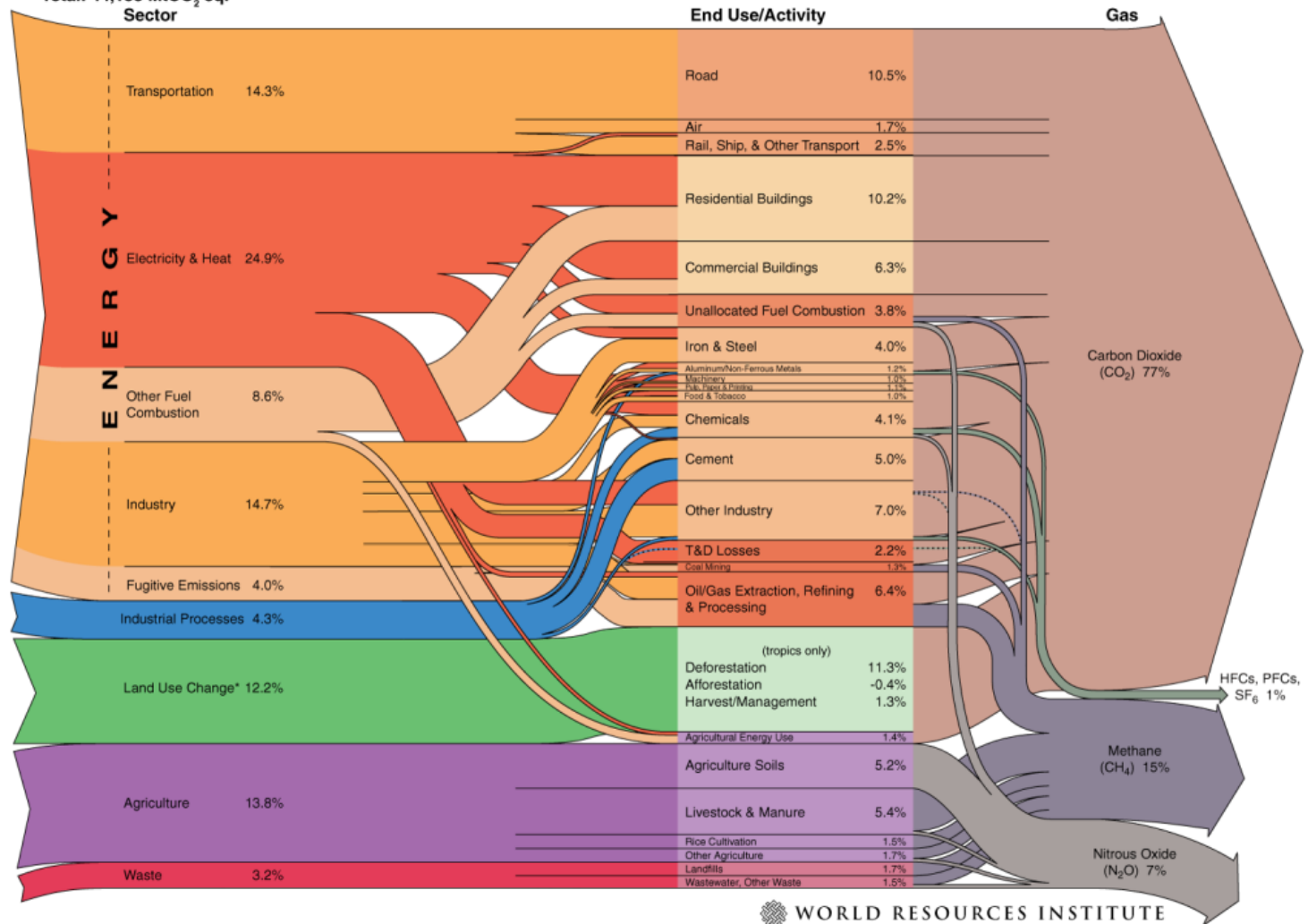


- Highest CO<sub>2</sub> levels now in over 160,000 years
- Under “business as usual”, GHG’s projected to increase exponentially over next 50-100 years
- It is the correlation driving change
  - CO<sub>2</sub> & temperature change
  - Human contribution.



# World Greenhouse Gas Emissions in 2005

Total: 44,153 MtCO<sub>2</sub> eq.



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# The Economics of Climate Change



- ❑ Climate Change is happening in South East Asia.
- ❑ SE Asia = 653 million people
- ❑ SE Asia = 173, 251 km of coastline
- ❑ Heavily reliant on Agriculture: (i) 43% of 2004 employment; (ii) 11% of GDP
- ❑ High susceptibility to drought, flood, typhoon
- ❑ World's largest provider of forest products

# The Impacts of Climate Change (SEA)



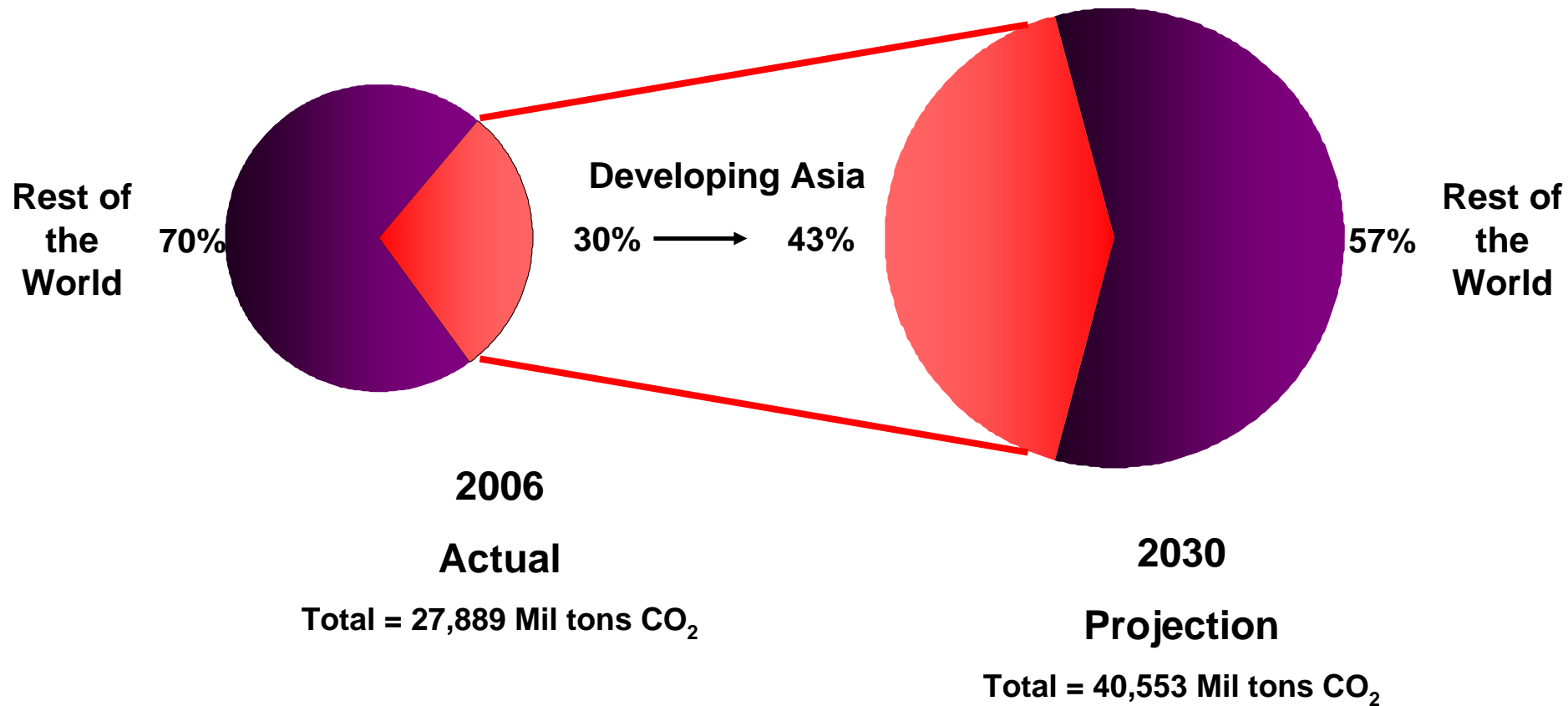
- ❑ Mean temperature rise 0.1- 0.3 Degrees Celsius per decade from 1951 - 2000
- ❑ Sea level increases 1-3 mm per year
- ❑ Decreased rainfall trend
- ❑ More increased drought, flood, storm.
- ❑ High susceptibility to drought, flood, typhoon
- ❑ Phil Storm numbers – 20 between 1960-69 & 120 b/w 2000 – 2008.

## The Impacts of Climate Change (2)



- Predicted changes for South East Asia include:-
  - Annual mean temperature rise 4.8 Celcius by 2100;
  - Mean sea level rise of 70 cm by 2100;
  - Thailand, Indonesia, Vietnam, dryer over next 2-3 decades;
  - Rice yield potentail will decline by up to 50% by 2100;
  - Potential economic cost 6.7% of GDP by 2100 ( x2 world average).

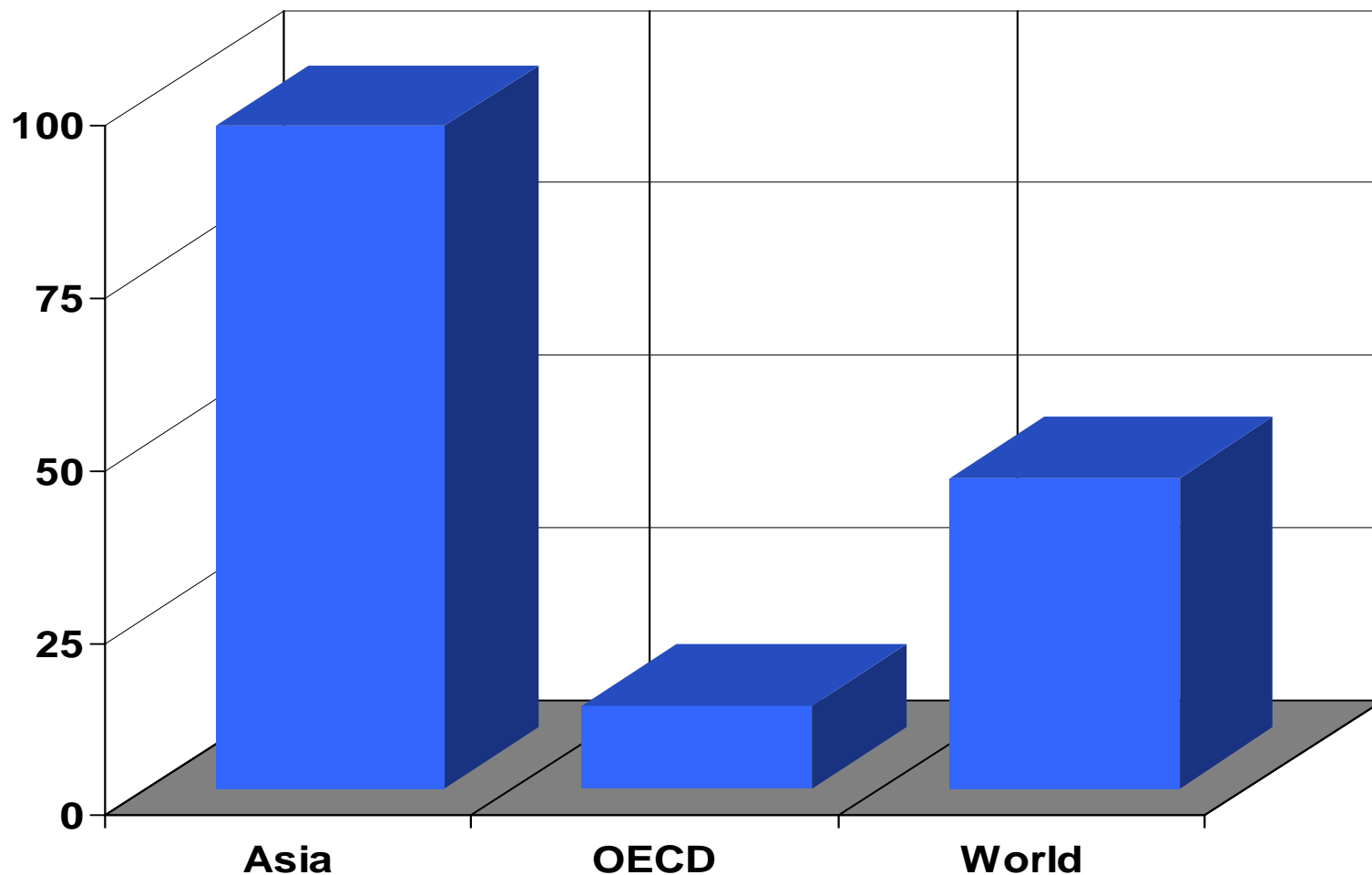
# Developing Asia's Share in Global CO<sub>2</sub> from Energy Consumption



Source: ADB, data from IEA World Energy Outlook 2008



# Growth Rates in Energy Consumption (2006-2030)



Source: International Energy Agency. World Energy Outlook 2008





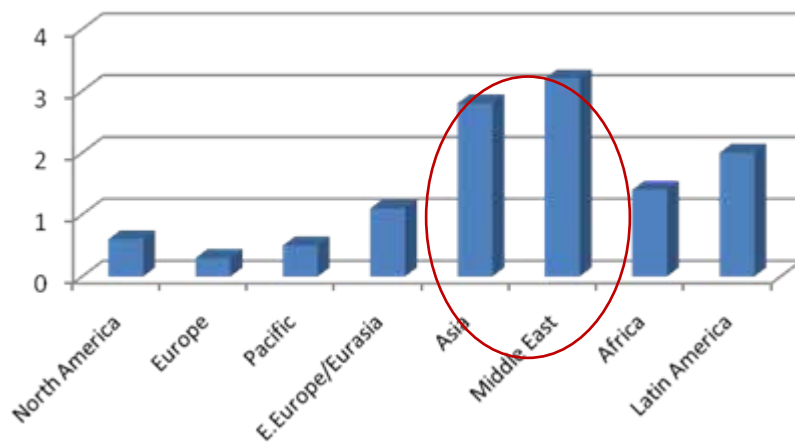
# Energy demand growth is concentrated in Asia

**Growth in demand Asia focused**

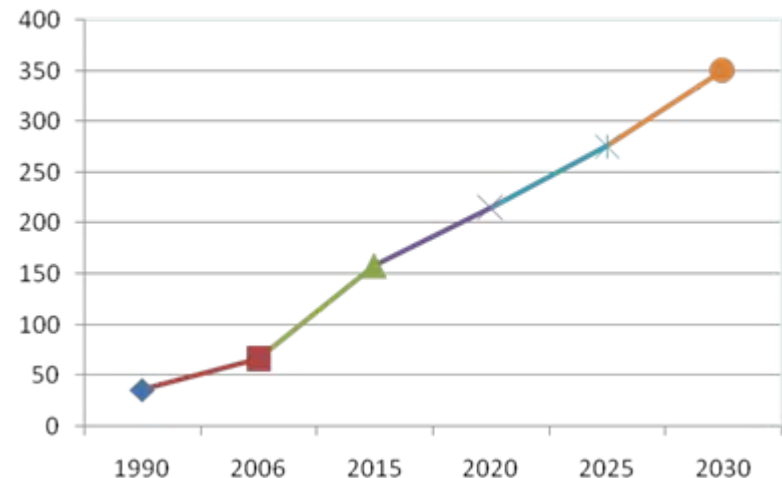
**Asia is a big part of the problem**

- World energy demand will expand 45% between 2006 & 2030 (at 1.6% p/a)
- China & India represent more than ½ this growth
- Developing Asia will grow in same period at 2.8% p/a to double energy consumption in the next 20 years
- Under present growth patterns 97% of projected growth in energy related GHG emissions out to 2030 will occur in non OECD countries (75% of this will occur in China, India & the Middle East).
- Need for deployment of clean energy technologies in these fastest growing regions

**World Primary Energy Demand by Region: Ave. Annual Growth Rate 2006-2030**

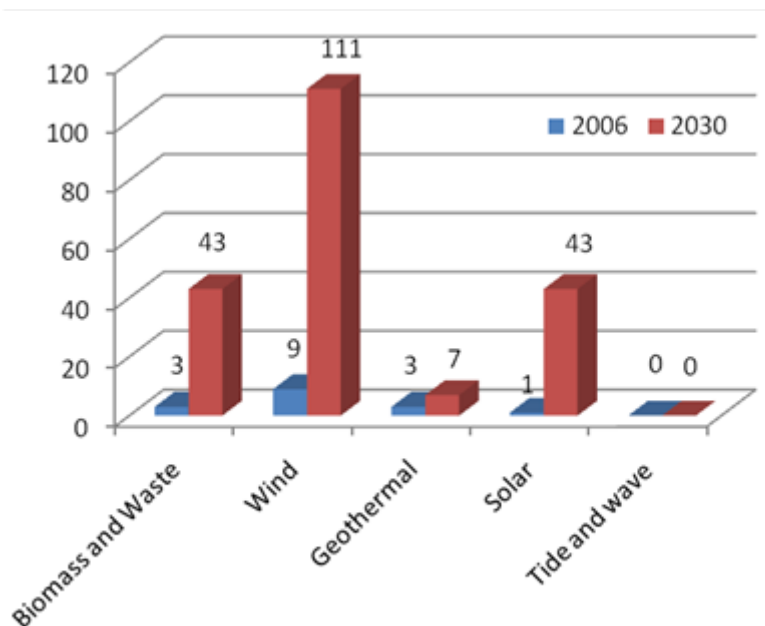


**World Primary Energy Demand (mtoe)**



# Growth in Asian generating capacity (ex Hydro)

Renewable Installed Generating Capacity in Asia (GW)



- Hydro, Wind, Biomass & Solar technologies all display very high growth in Asia over next 20 years
- Most Asian countries have significant wind and solar resources to be exploited
- Hydro will also feature prominently, not displayed in this graph

(GWs)	2006	2015	2030	% Inc to 2015	% Inc 2006-2030
Hydro	213	336	494	58%	132%
Biomass and Waste	3	9	43	200%	1333%
Wind	9	52	111	478%	1133%
Geothermal	3	4	7	33%	133%
Solar	1	3	43	200%	4200%

# Thank You

**Josh Carmody**  
**[jcarmody@adb.org](mailto:jcarmody@adb.org)**  
**[adb.org](http://adb.org)**

**[www.adb.org/clean-energy](http://www.adb.org/clean-energy)**

