

LCI2012-RRFP08

Low Carbon Urban Infrastructure Investment: Cases of China, Indonesia, and Japan

APN LCI research project

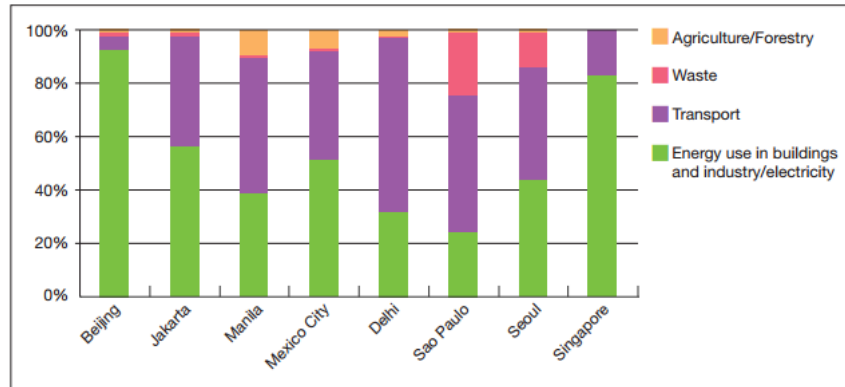
2nd LoCARNet Annual Meeting, Bogor, Indonesia

Takako Wakiyama, Institute for Global Environmental Strategies
Joni Jupesta, United Nations University-Institute of Advanced Studies
Ping Jiang, Department of Environmental Science & Engineering, Fudan University, China
Rizaldi Boer, Center for Climate Risk and Opportunity Management in Southeast Asia and Pacific (CCROM-SEAP), Bogor Agricultural University, Indonesia
Retno Gumilang Dewi, Center Research on Mineral and Energy (CRE), Institut Teknologi Bandung, Indonesia
Manu Verghese Mathai, United Nations University- Institute of Advanced Studies (UNU-IAS)

Methodology

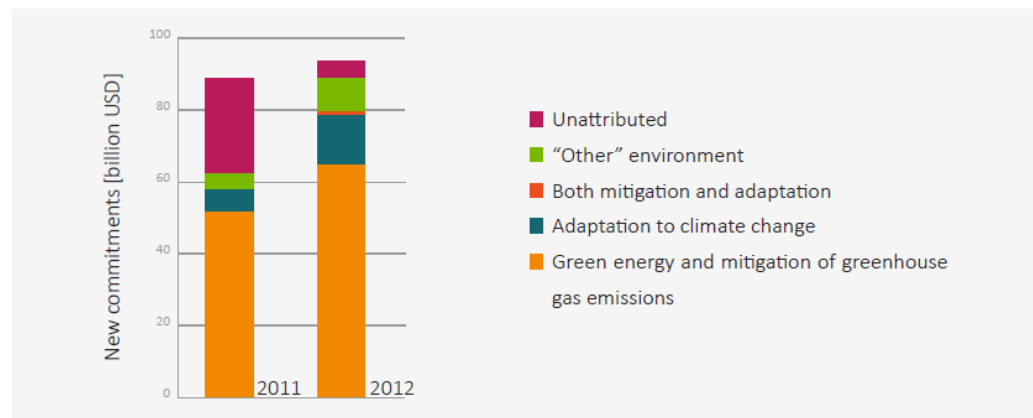
- Data Collection to conduct by all partners in their own cities.
- Working Groups to conduct data analysis and publish the outcomes:
 1. Institutional Framework (Dr. Manu Mathai, Dr. Li Wan Xin, and Dr. Lukytawati Anggraeni).
 2. Life Cycle Assessment (Dr. Jiang Ping and Dr. Joni Jupesta).
 3. Risk Assessment (Ms. Takako Wakiyama and Dr. Joni Jupesta).
 4. Integrated Assessment (Dr. Rizaldi Boer, Dr. Retno Gelang Dewi, and Dr. Toni Bakhtiar).

Carbon emission profiles for metropolitan areas



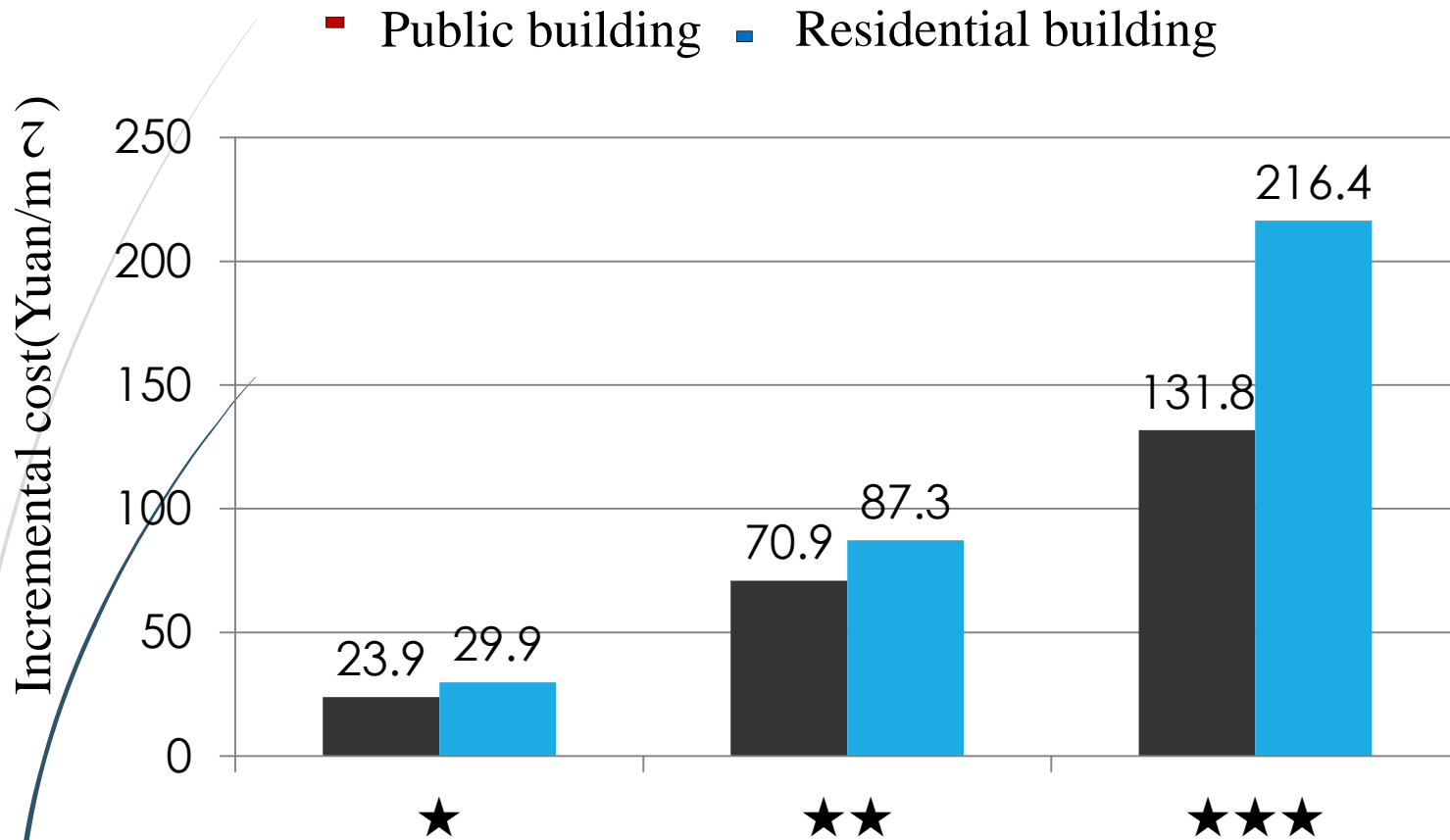
Source: Sovacool and Brown 2010

Comparison of the share of financial commitments for each category, and unattributed data provided in 2011 and 2012 (IDFC includes the members from China, Indonesia and Japan)



Source: International Development Finance Club (IDFC), 2013

Incremental costs of green buildings in China in 2012



Presentation in UGEC by Dr. Ping Jiang

Recommendations

Energy Performance Contracting

- Business get involved in energy saving activities

Carbon Trading

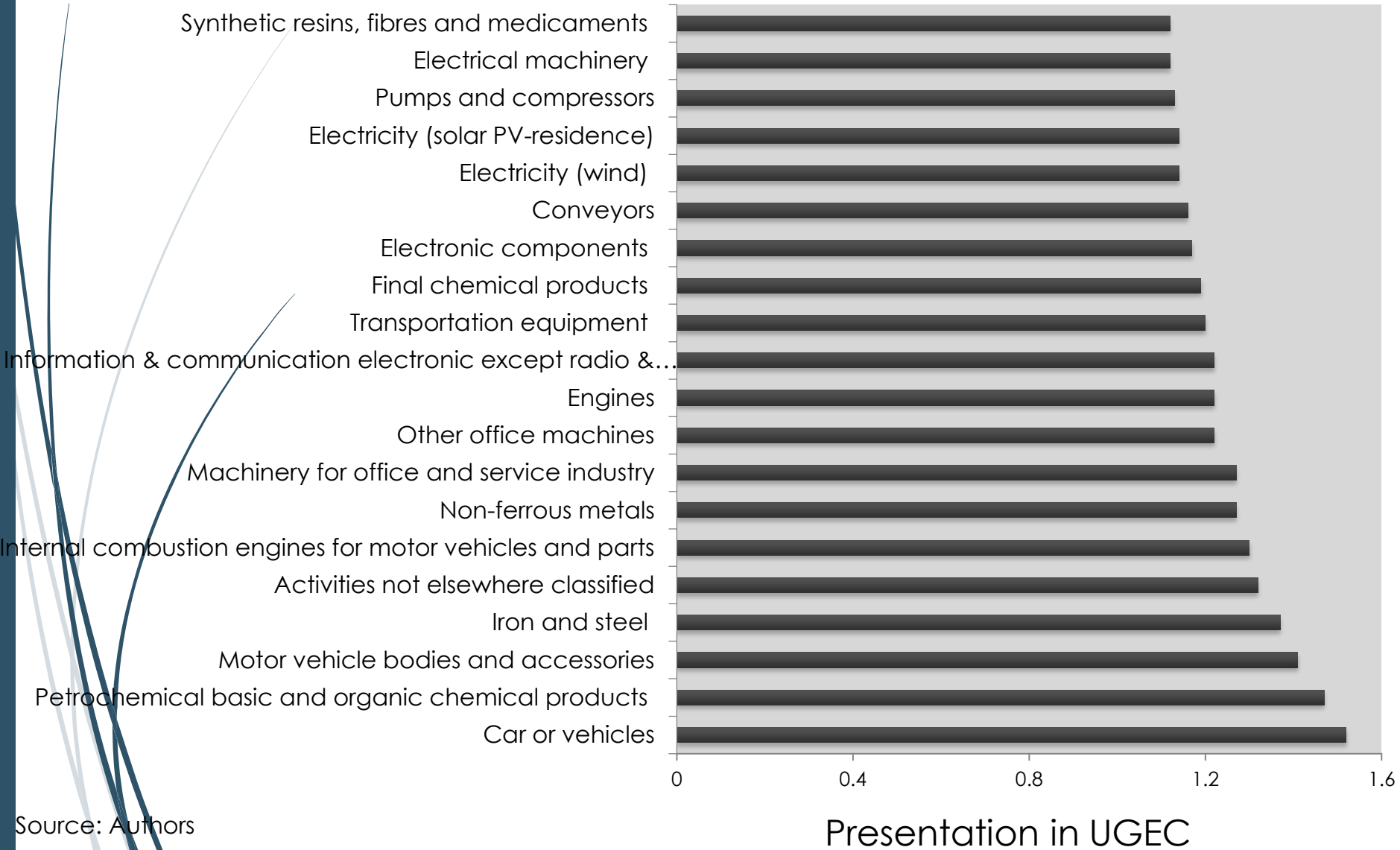
- Financial incentive to green buildings through the market

Carbon tax

- Tax policies designed by government to green buildings

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Backward Linkage Sectors



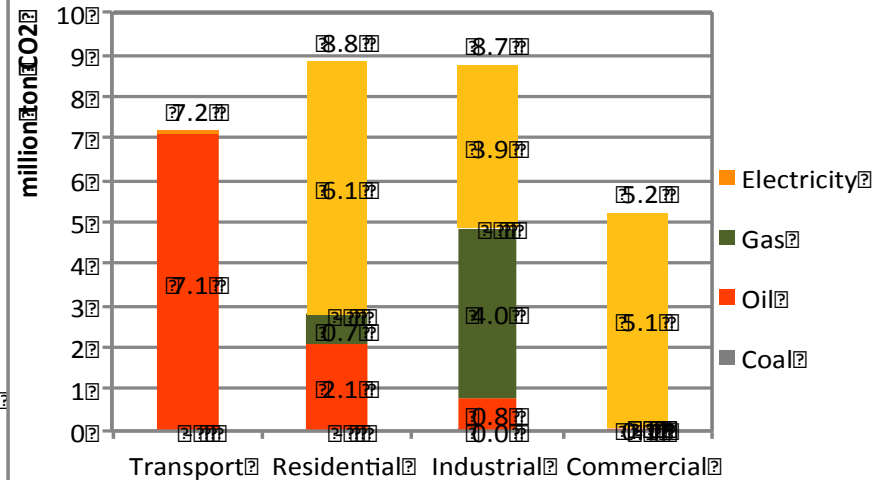
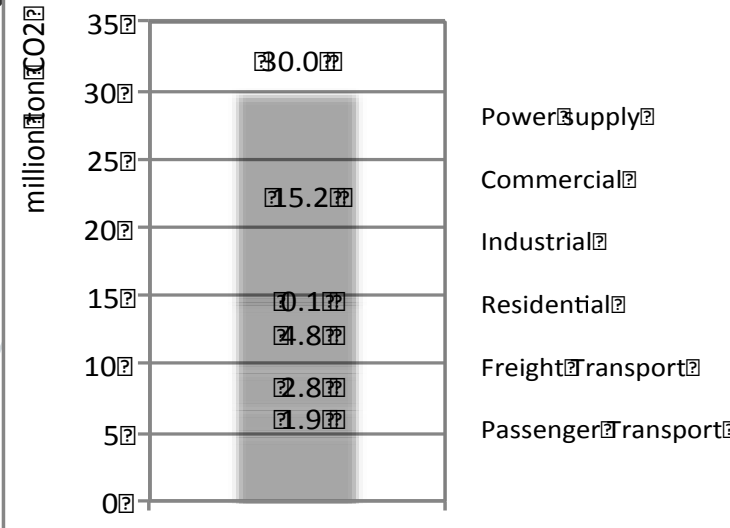
Major Input sectors for electricity (solar PV- residence)

No	Input sectors	Share
1	Repair of construction	0.13
2	Education and research	0.12
3	Financial services	0.11
4	Non-ferrous metals	0.11
5	Electric power facilities construction (thermal power)	0.10
6	Ceramic, stone and clay products	0.07
7	Business services	0.07
8	Other business services	0.06
9	Electric power facilities construction	0.05
10	Information and communications	0.05

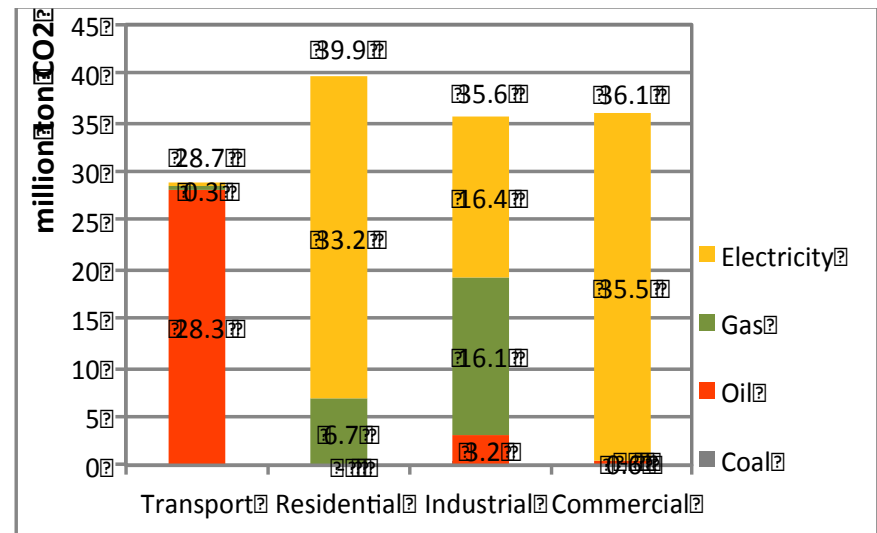
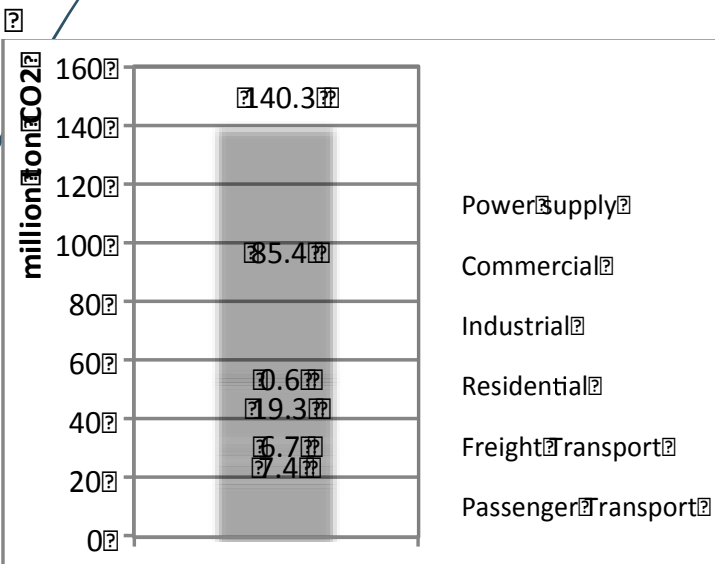
Source: Authors calculation based on the 2005 Japanese I-O table and report from Ministry of Economic, Transportation and Industry

GHG emission of energy sector in DKI

2005

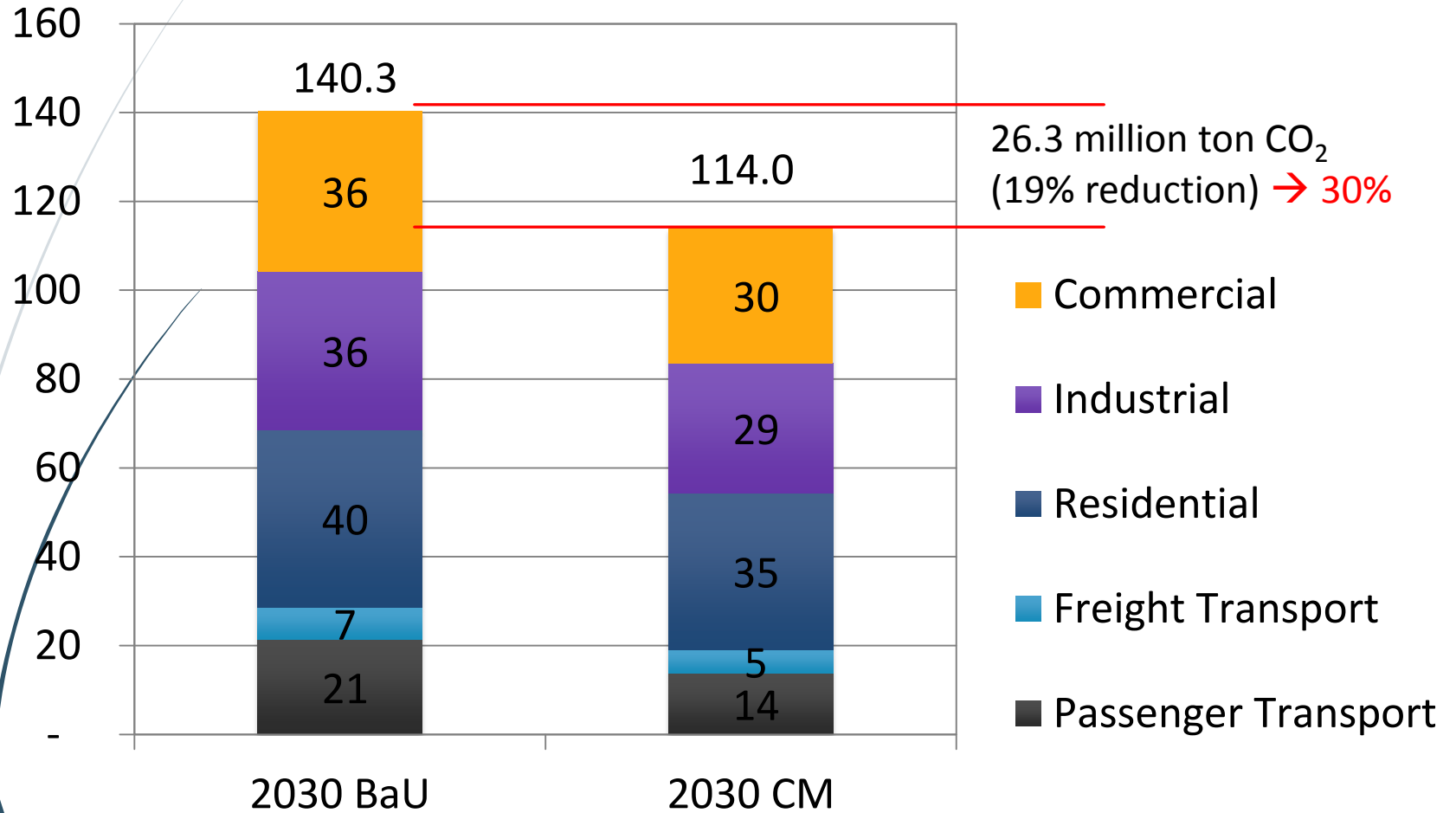


BaU 2030



GHG emission Projection of energy sector under BaU and Mitigation Scenario

million ton CO₂





Outcomes of APN



- Knowledge Sharing between countries.
 - Capacity Building by involving young researchers in the research team.
 - Enhance further cooperation in future between country partners.
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- Presentation in 2nd international UGEC
 - Publish each research as a peer-reviewed book chapter



Thank you