Open Access

Kw :

Citation: Mardiana A, Riffat SB (2015) Building Energy Consumption and Carbon dioxide Emissions: Threat to Climate Change. J Earth Sci Climat Change S3:001. doi:10.4172/2157-7617.S3-001

Page 2 of 3

			2 60%	2		2.2		2.2	2	2	2	
	[21,22]. W	, a	a 0070 a x	a		a a	a	aa,	a	a ,	a	a
11 20%	а	a [1	7]. I UK,		а	а.						
	a a	a IE	50% A [22]. I C	a,		a			а	x		
a -	a a	a	65%	a								
2	а	[23]. K a R	a [2₱]	2								
d	d	US a	35% a	a								
HVAC	. F	,										
a	a a	a a [25] I E	x a 30	50%								
a	a	[20]. I E a	a IAQ,									
a 700/	a	a a	a a	60 S								
/0%	a a a	a HVAC	[26]]	. 5								
,			a	a								
[27.28]	a a a B	a a	2	2								
[27,20].	a 50%	a a [2	9].Baa	, a								
a		HVAC										
a a	a	a a	. W	а								
a a		a,		-								
,	x	a										
[30	a a a),31].	a a										
Ca b C	Ε		B E									
Aa												
a a		a	,	a								
2		∳ ∧	aaa,									
I	a Pa	CaCa	(IPCC)	а								
- a		a a	8.6									
$() CO_2$ 2030, a	a () 15.6	200 f a x CO.	-	26% a								
[1]. F	,	a x										
a 3	0 10%	a a	x 25 a	а								
а	a	a a a	x 25° a	,								
[32,33].												
a	х											
a -		a	1:) a a	· ·)								
		u	a,	a ,								
		. а										
a x a	aa	L	a a	a a								
[3 1]. T		, aa a	a a	ı a								
a a	а	2	a a	X X								
,	[35-37]. a a	a	л								
а		a a x										
_	a x aa [38].	a Ia a	a x	a a								
	a [20].	a a	a									
а	а	a a	a a									

а

а,

[39]. Ba

climate change: towards a european framework for action. Commission of the European Communities, UK.

- 8. OECD (2010) Cities and Climate Change. OECD publications, ISBN: 978- 92-64-09137-5, France.
- 9. United Nations Framework Convention on Climate Change (2006) Background paper on impacts, vulnerability and adaptation to climate change in Africa for the African Workshop on Adaptation Implementation of Decision 1/CP.10 of the UNFCCC, Accra, Ghana.
- Khajuria A, Ravindranath NH (2012) Climate Change Vulnerability Assessment: Approaches DPSIR Framework and Vulnerability Index. J Earth Sci Climat Change 3: 109.
- Liao H, Huai-Shu Cao (2013) How does carbon dioxide emission change with the economic development? statistical experiences from 132 countries. Global EnvironChange 23: 1073-1082.
- 12. Cloy JM, Smith KA (2013) Greenhouse gas emissions. In: Reference Module in Earth Systems and Environmental Sciences.
- Macknick J (2009) Energy and Carbon Dioxide Emission Data Uncertainties. International Institute for Applied Systems Analysis, Laxenburg, Austria.
- Mardiana A, Riffat SB (2013) Review on physical and performance of heat recovery system for building applications. Renewable Sustainable Energy Rev 28:174-190.
- Yau YH, Hasbi S (2013) A review of climate change impacts on commercial buildings and their technical services in the tropics. Renewable Sustainable Energy Rev 18: 430-441.
- Gul MS, Patidar S (2015) Understanding the energy consumption and occupancy of a multi-purpose academic building. Energ Buildings 87: 155-165.
- 17. EIA (2014) International Energy Outlook 2014, U.S Energy Information Administration, Washington DC, USA.
- Lior N (2008) Energy resources and use: The present situation and possible paths to the future. Energy 33: 842-857.
- Reinders AHME, Vringer K, Blok K (2003) The direct and indirect energy requirement of households in the European Union. Energy Policy 31: 139-153.
- Liu Z, Geng Y, Lindner S, Zhao H, Fujita T, et al. (2012) Embodied energy use in China's industrial sectors. Energy Policy 49: 751-758.
- Mardiana, A, Riffat SB (2012) Review on heat recovery technologies for building applications. Renewable Sustainable Energy Rev 16: 1241-1255.
- 22. IEA (2012) Energy Policies of IEA Countries, UK.
- 23. Wu Y (2003) Chinese building energy conservation: Existing situation, problems and policy, presentation. In:International Conference on Sustainable Development in Building and Environment, China.
- 24. Kwok AG, Rajkovich NB (2010) Addressing climate change in comfort standards. Building Environ 45: 18-22.
- Khan N, Su Y, Riffat SB (2008) A review on wind driven ventilation techniques. Energ Buildings 40: 1586-1604.
- Besant RW, Simonson CJ (2000) Air-to-air energy recovery. ASHRAE J: 31-42.
 27.
- of a building's thermal properties. Energ Buildings 38: 568-573.
- Lazzarin RA, Gasparella A (1998) Technical and economical analysis of heat recovery in building ventilation systems. Appl Thermal Eng 18: 47-67.
- Roulet CA, Heidt FD, Foradini F, Pibiri MC (2001) Real heat recovery with air handling units. Energ Buildings 33: 495-502.

 Gong G, Zeng W, Wang L, Wu C (2008) A new heat recovery technique for airconditioning/ heat-pump system. Appl Thermal Eng 28: 2360-2370.

Page 3 of 3

- Wang S, Fang C, Guan X, Pang B, Ma H (2014) Urbanisation, energy consumption, and carbon dioxide emissions in China: A panel data analysis of China's provinces. ApplEnerg 136: 738-749.
- arminal buildings: A case study for the future Istanbul International Airport. Energ Buildings 76: 109-118.
- 33. Alshehry AS, Belloumi M (2015) Energy consumption, carbon dioxide emissions and economic growth: The case of Saudi Arabia. Renewable Sustainable Energ 41: 237-247.
- 34. Zhu J, Chew DAS, Lv S, Wu W (2013) Optimization method for building envelope design to minimise carbon emissions of building operational energyconsumption using orthogonal experimental design (OED). Habitat Int 37: 148-154.
- 35. Emeakaroha A, Ang CS, Yan Y, Hopthrow T (2014) A persuasive feedback support system for energy conservation and carbon emission reduction in campus residential buildings. Energ Buildings 82: 719-732.
- Ng ST, Chen Y, Wong JMW (2013) Variability of building environmental assessment tools on evaluating carbon emissions. Environ Impact As Rev38: 131-141.
- 37. Alhorr Y, Eliskandarani E, Elsarrag E (2014) Approaches to reducing carbon dioxide emissions in the built environment: Low carbon cities International J Sustainable Built Environ.
- Shao L, Chen GQ, Chen ZM, Guo S, Han MY, et al. (2014) Systems accounting for energy consumption and carbon emission by building. Commun Nonlinear Sci 19: 1859-1873.
- Biswas WK (2014) Carbon footprint and embodied energy consumption assessment of building construction works in Western Australia. Int J Sustainable Built Environ (In Press).
- 40. Pacala, S,