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Bu proje Avrupa Birliđi ve Trkiye Cumhuriyeti tarafından ortak finanse edilmektedir.



GHG Emission Trends and Projections for Building Sector

Aynur TOKEL
GHG Inventory Expert

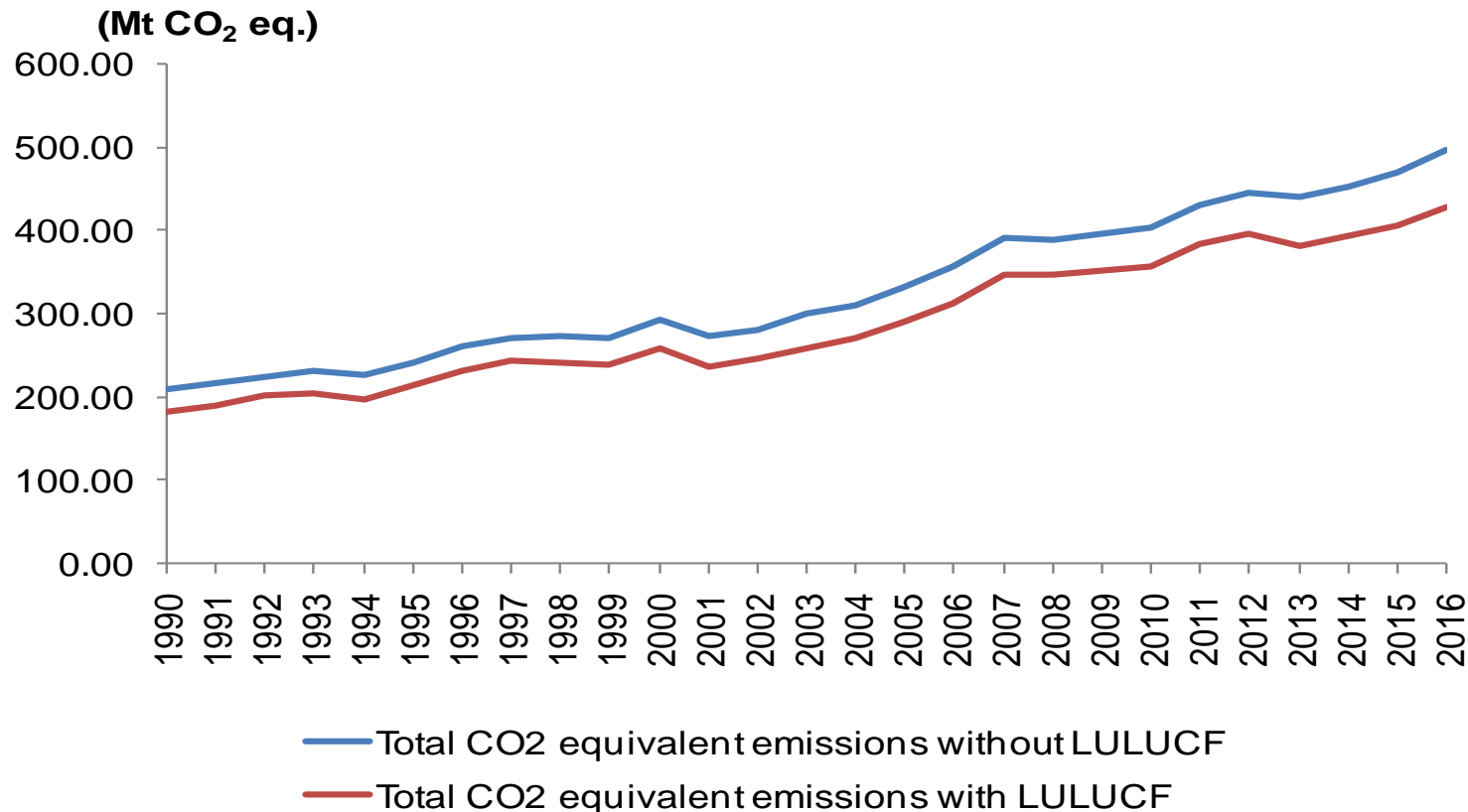
*Component 1 Dissemination Workshop
22 May 2018, Meyra Palace Hotel, Ankara*





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GHG Emissions



GHG emissions without LULUCF;

in 1990 : 210.7 Mt CO₂ eq.

in 2016 : 496.1 Mt CO₂ eq.

135.4% increase as compared to 1990 level

Source: UNFCCC National Inventory Submissions 2018



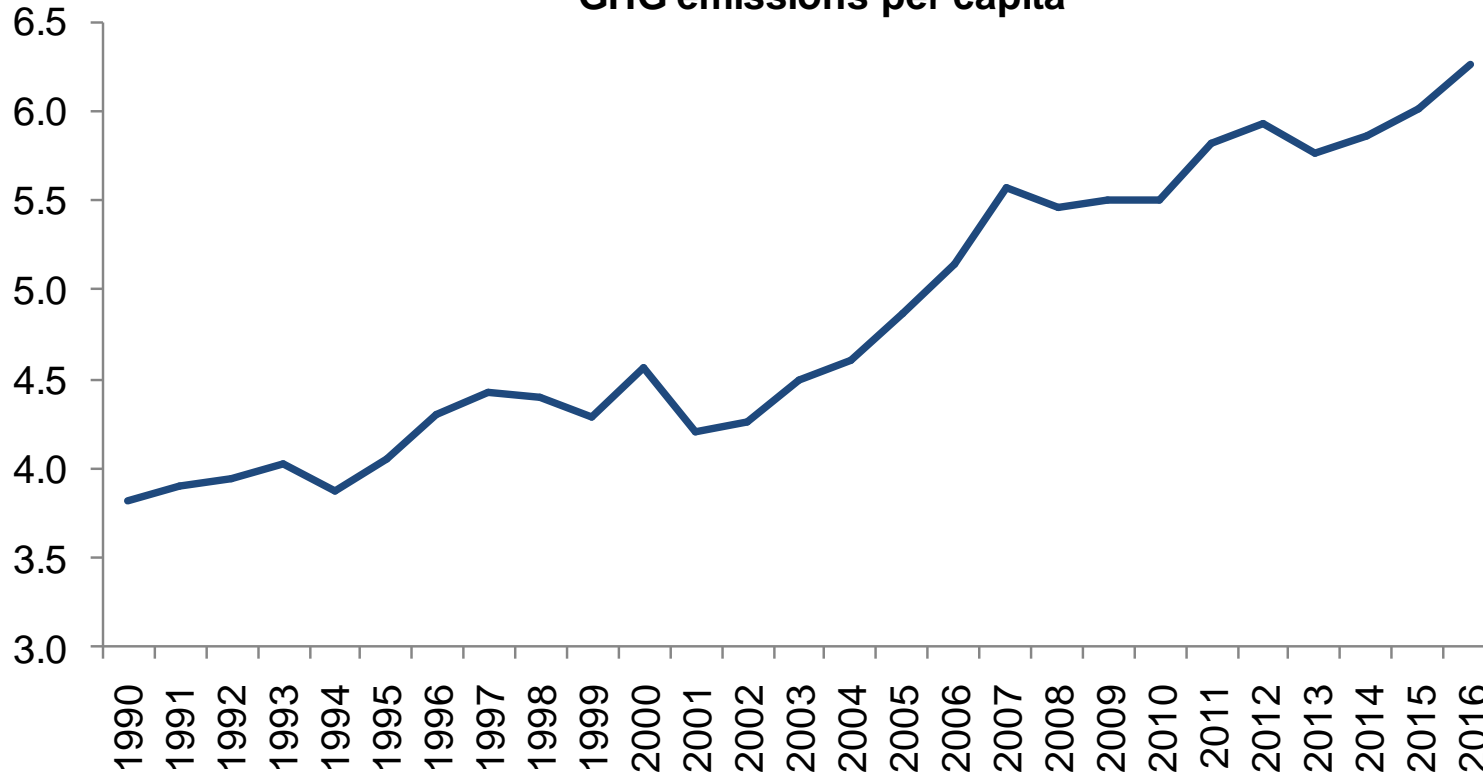


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GHG Emissions

(tonnes CO₂-eq./capita)

GHG emissions per capita



GHG emissions per capita;

In 1990 : 3.8 tonnes CO₂
eq/capita

In 2016 : 6.3 tonnes CO₂
eq/capita

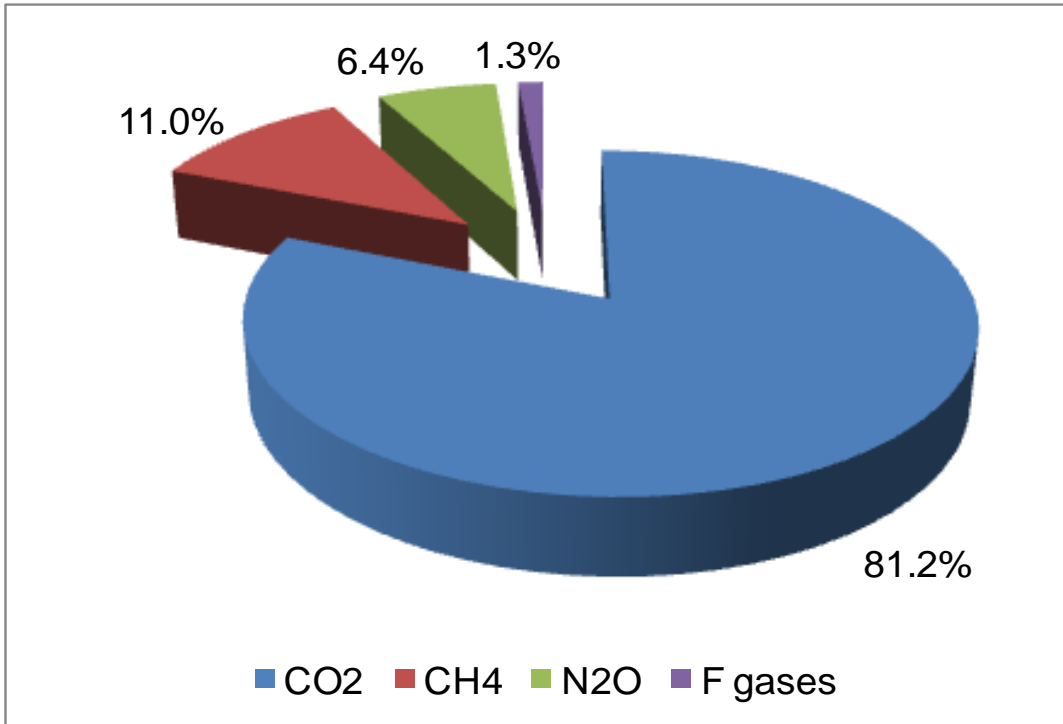
Source: UNFCCC National Inventory Submissions 2018





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GHG Emissions

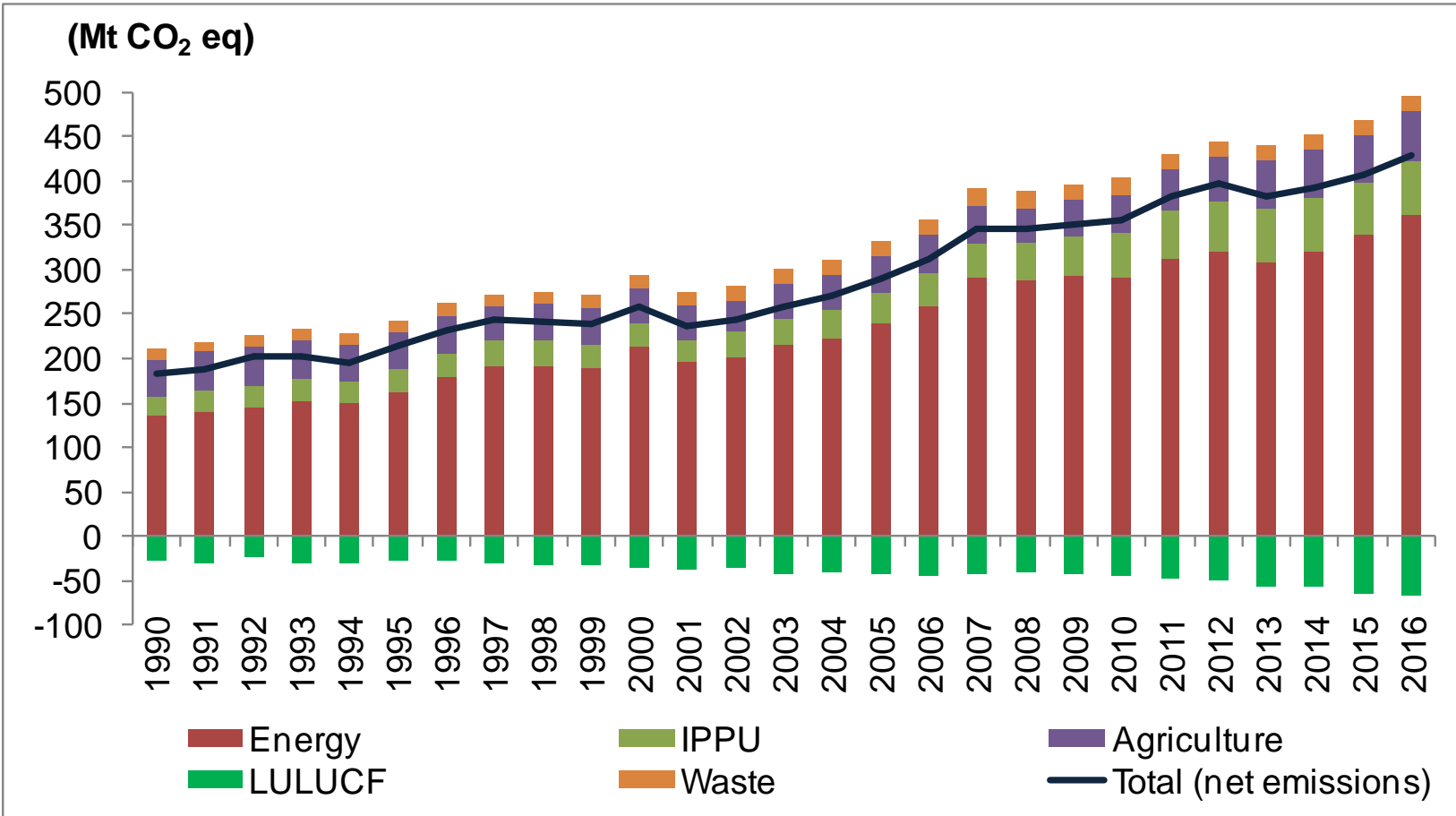


GHG emissions by sectors, (%)				
	CO ₂	CH ₄	N ₂ O	F-gases
Energy	86.1	18.6	12.1	-
IPPU	13.6	0.03	3.8	100.0
Agriculture	0.3	55.5	77.6	-
Waste	-	25.8	6.5	-



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GHG Emissions



In 2016 sectors contribution to total GHG emissions;

- Energy: %72.8
- Industrial Processes and Product.Use (IPPU) : %12.6
- Agriculture : %11.4
- Waste : %3.3

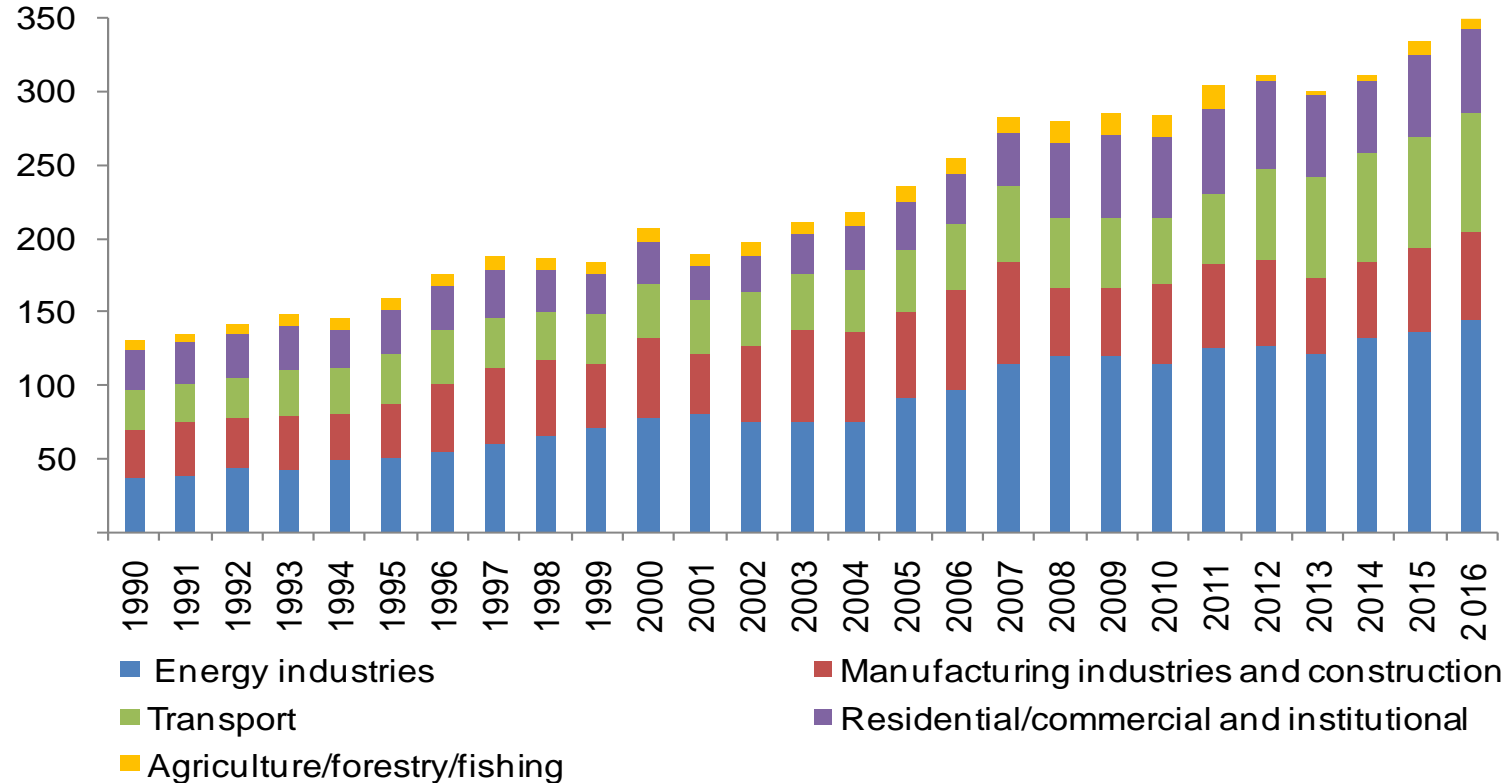


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GHG Emissions

(Mt CO₂-eq.)

GHG emissions from fuel combustion



In 2016

GHG emission from energy sector;

Fuel combustion : 97.7%

Fugitives: 2.3%

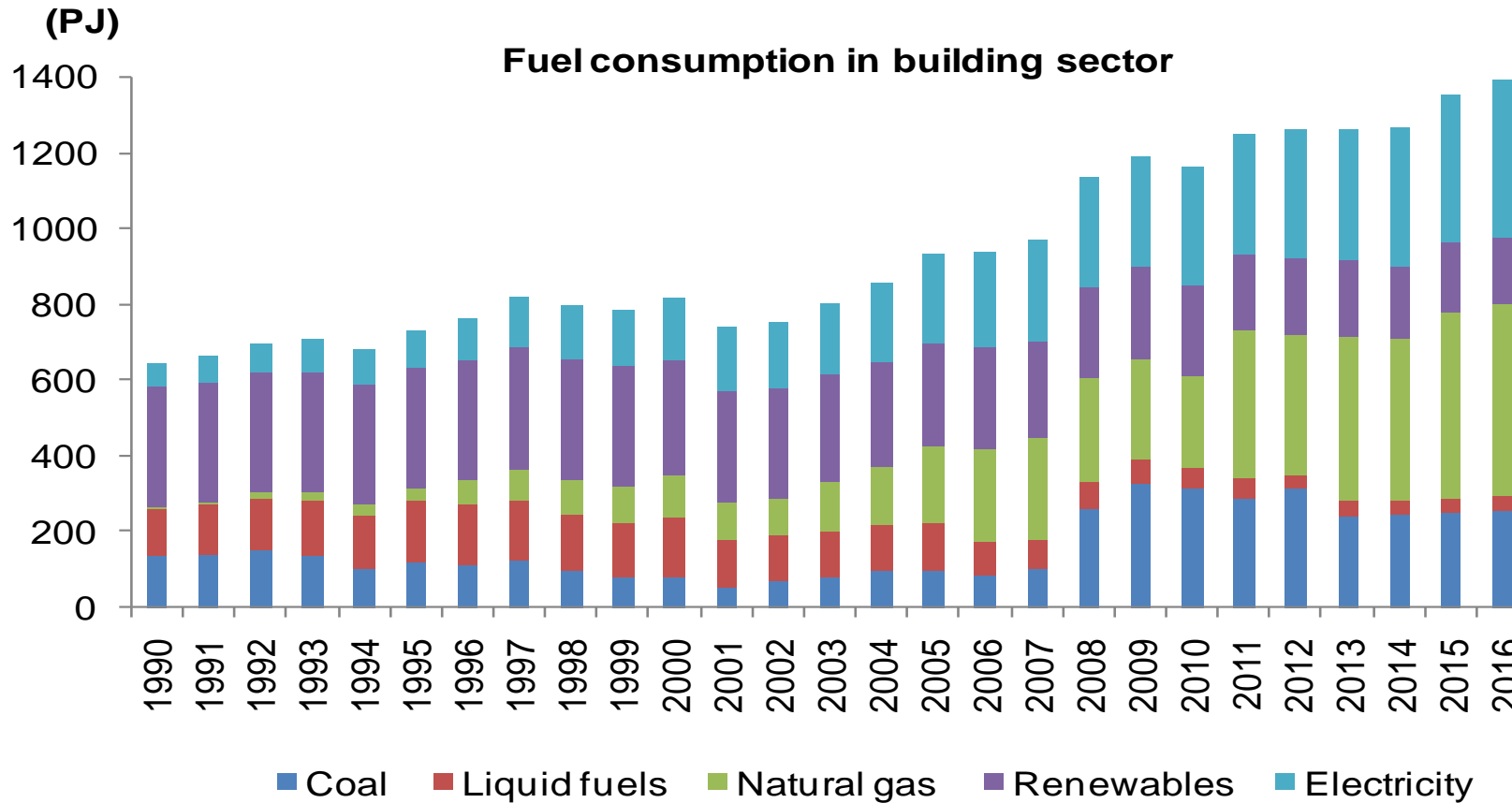
Fuel combustion emissions;

- Energy industry: 41%
- Transport : 23%
- Manufacturing industry : 17%
- Residential/commercial/institutional: 16%
- Agriculture/forestry/Fishing :3%



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GHG Emissions Building Sector



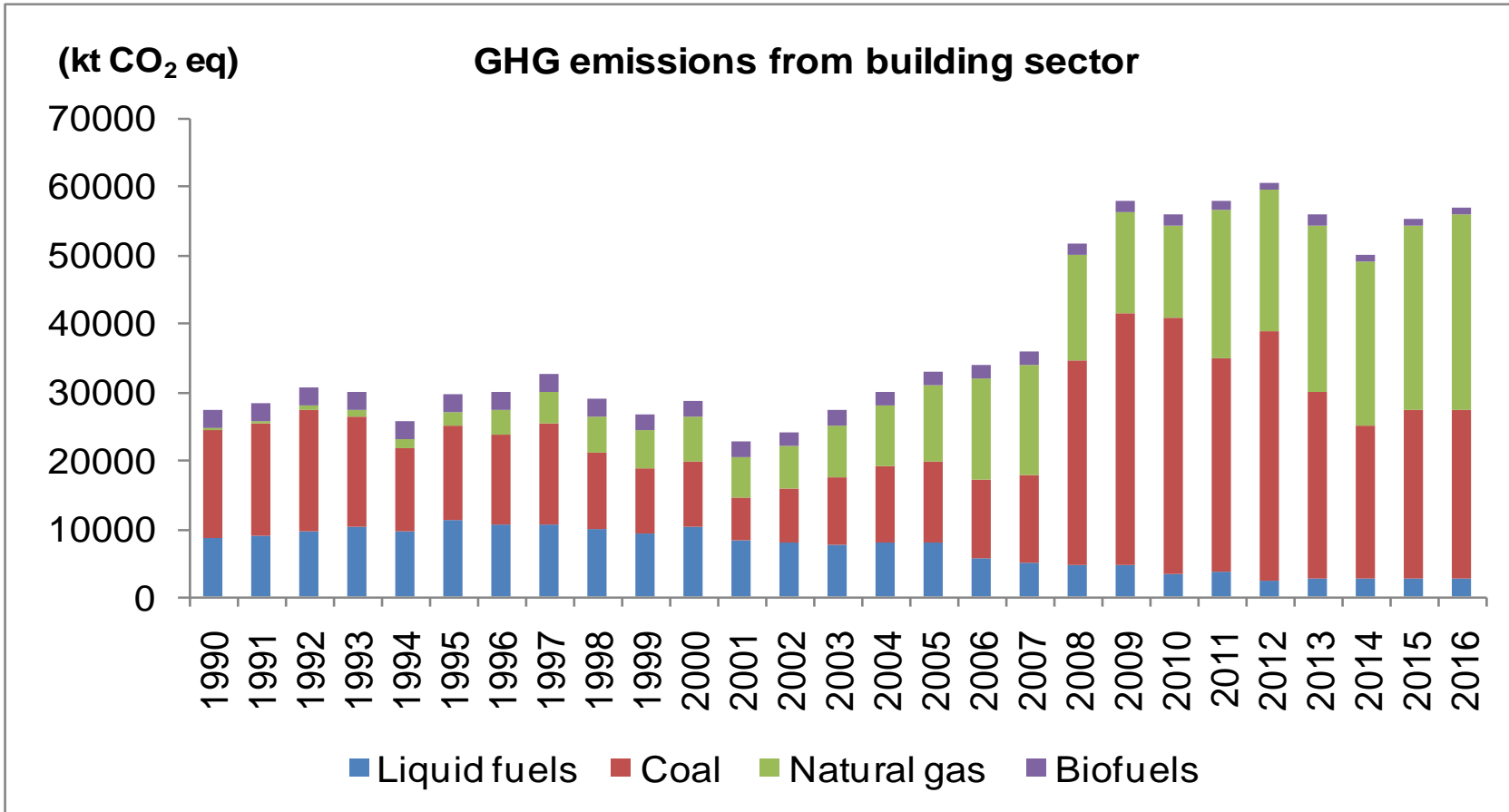
Fuel consumption in 2016: 1393 PJ

- Natural gas :36%
- Liquid fuels :3%
- Coal :18%
- Renewables:13%
- Electricity: 30%



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GHG Emissions Building Sector



GHG emissions from building sector ;

In 1990 : 27.2 Mt CO₂ eq.
In 2016 : 56.8 Mt CO₂ eq.

- Natural gas :50%
- Coal : 44%
- Liquid fuels:4%
- Biofuels :2%



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GHG Emissions

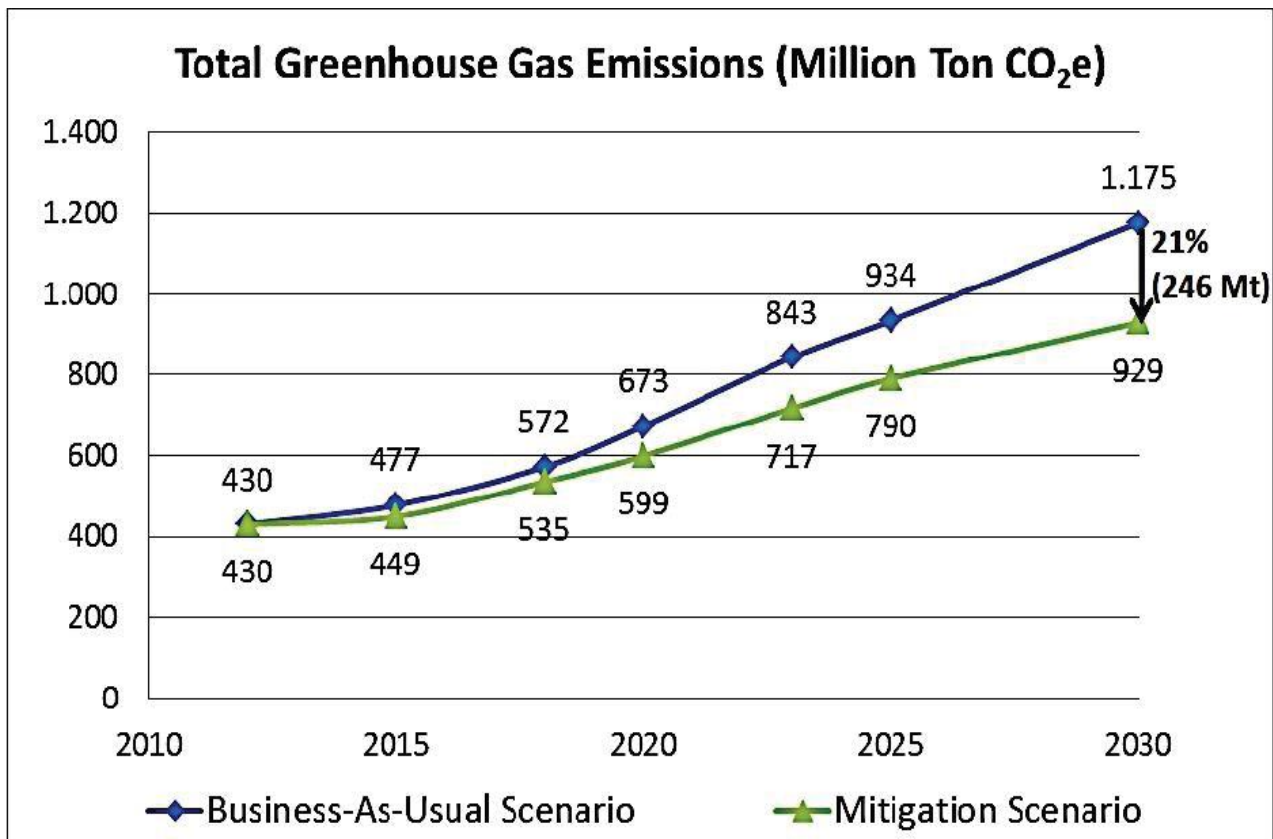
CO₂ intensity of fuels

Fuels	2016 CO₂ intensity of fuels (t CO₂/TJ)
Lignite	108
Petrocoke	97
Sub bituminous coal	85
Hard coal	91
Residual fuel oil	77
Other petroleum products	73
Waste oil	73
Diesel oil	72
LPG	63
Natural gas	56



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GHG Emission Projections



Turkey Government's official
INDC GHG target until 2030;
2030 yılında seragazi
emisyonları (AKAKDO dahil) :
With BAU scenario;
1175 Mt CO₂ eq.
With measures scenario;
929 Mt CO₂ eq.

Source: Turkey's 6th National Communication





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GHG Emission Projections

Sectors	GHG emission projections without measures scenario		GHG emission projections without measures scenario		Decrease in emissions	
	(kt CO ₂ eq)		(kt CO ₂ eq)		(%)	
	2020	2030	2020	2030	2020	2030
Energy	538 887	943 547	499 336	738 266	-7.3	-21.8
Transport	101 190	136 513	101 113	135 994	-0.1	-0.4
Industry/industrial processes	94 750	169 754	94 785	169 754	0.0	0.0
Agriculture	51 557	59 278	51 557	59 278	0.0	0.0
Waste management/waste	27 900	40 900	23 610	31 400	-15.4	-23.2
Forestry/LULUCF	-40 193	-38 698	-70 036	-69 710	74.2	80.1
Total with LULUCF	672 901	1174 781	599 252	928 987	-10.9	-20.9
Total without LULUCF	713 094	1213 479	575 642	897 587	-19.3	-26.0

Building sector is included under energy sector

Source: Turkey's Third Biennial Report





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Thank you for your attention

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