



Establishing Energy Efficiency and Mitigation Strategies in Turkey

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General Overview

- Turkish-MARKAL studies began in 2006,
- Turkey is modeled as a single region,
- Each period is set for 5 years,
- Analysis time period is 2005-2025,
- Reference Energy System (RES) is constructed for the year 2000, then revised to 2005.

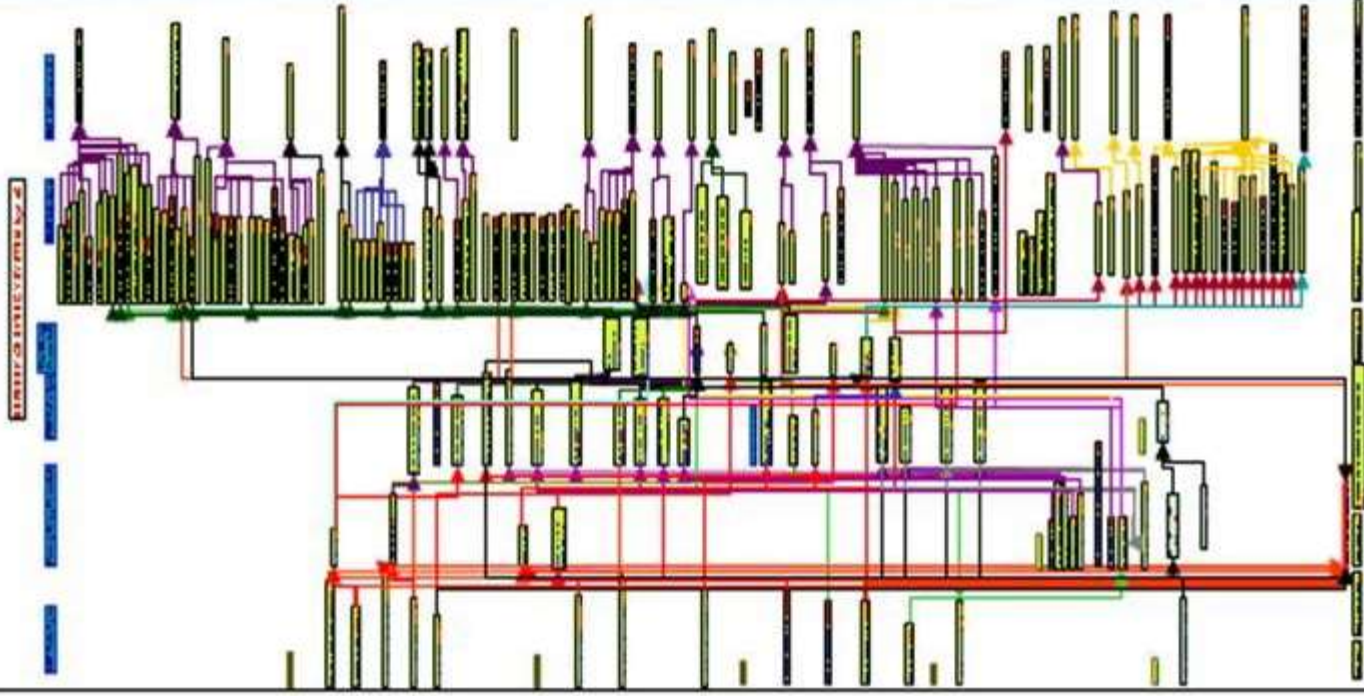


Turkey and the Kyoto Protokol

- **Turkish Parliament approved its membership of the Kyoto Protokol on 05 February 2009,**
- **No additional burden on Turkey until 2012,**
- **A target and responsibilities should be defined for establishing GHG mitigation strategies thereafter.**

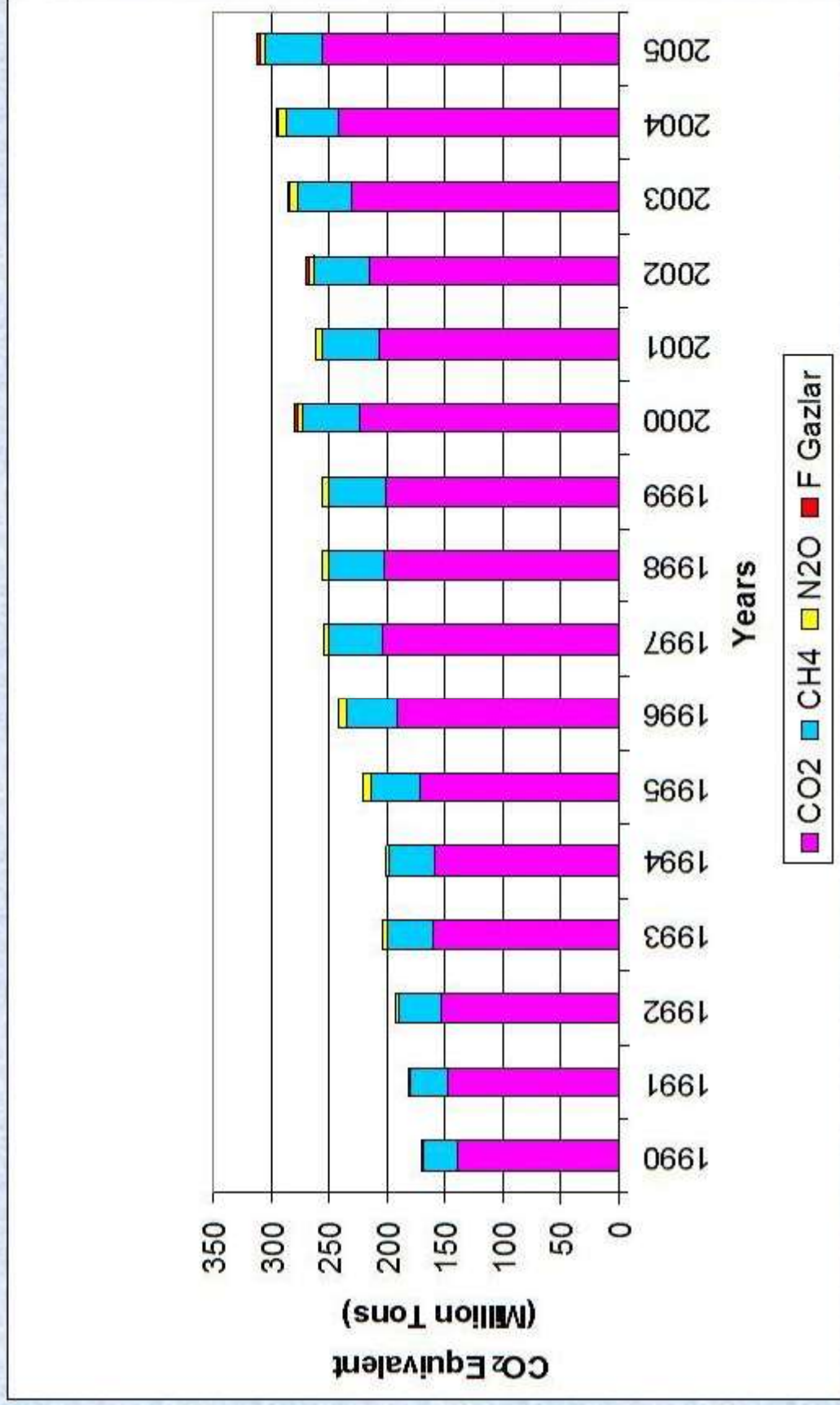
General Overview

- A detailed RES revised and more developed,
- Demand sectors are **Industrial, Residential, Agricultural, Transport and Commercial,**
- 18 Primary energy carriers,
- 17 Resource technologies,
- 9 Process & 12 conversion technologies,
- 11 Final energy carriers,
- 170 demand technologies and 40 demands





Greenhouse Gas Emission Inventory of Turkey





Increase in GHG 1990-2005

Million tonnes of CO₂ equivalent

	1990	2000	2002	2004	2005
TOTAL	170.1	280.0	270.6	296.6	312.4
CO ₂	139.6	223.8	216.4	241.9	256.3
CH ₄	29.2	49.3	46.9	46.3	49.4
N ₂ O	1.3	5.7	5.4	5.5	3.4
HFCs	0.0	0.8	1.4	2.2	2.4
SF ₆	0.0	0.3	0.5	0.7	0.9

Kaynak: TURKSTAT



Scenarios Applied

CO₂M:

CO₂ emission level will be decreased %5 below 2005 level till 2020, which is the same as countries with responsibility in this mitigation process.

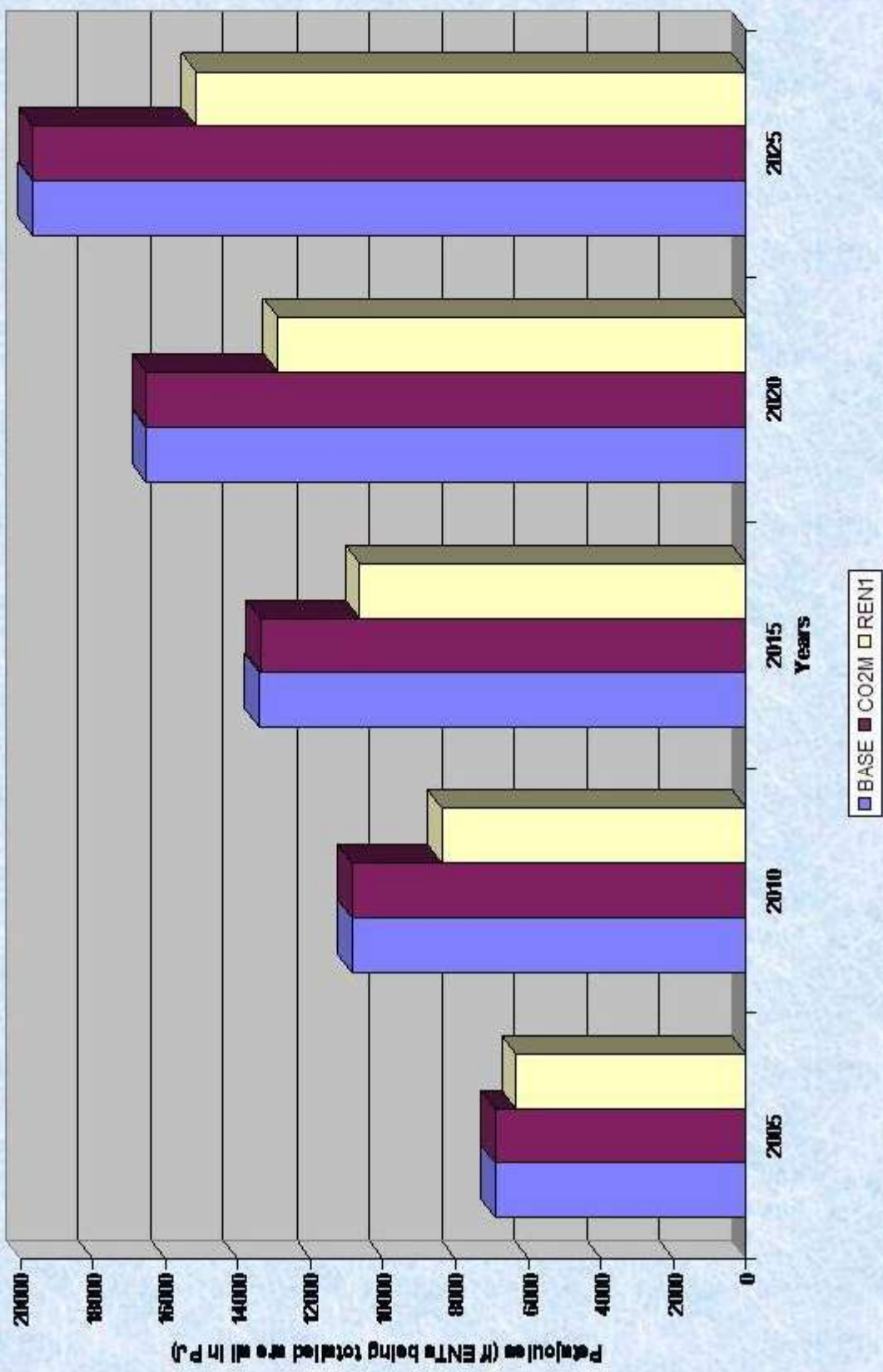
REN1:

The target is to increase the renewable energy utilization up to the upper available levels until 2020 from the year 2005 and applying carbon tax on the whole system.



Total Final Energy

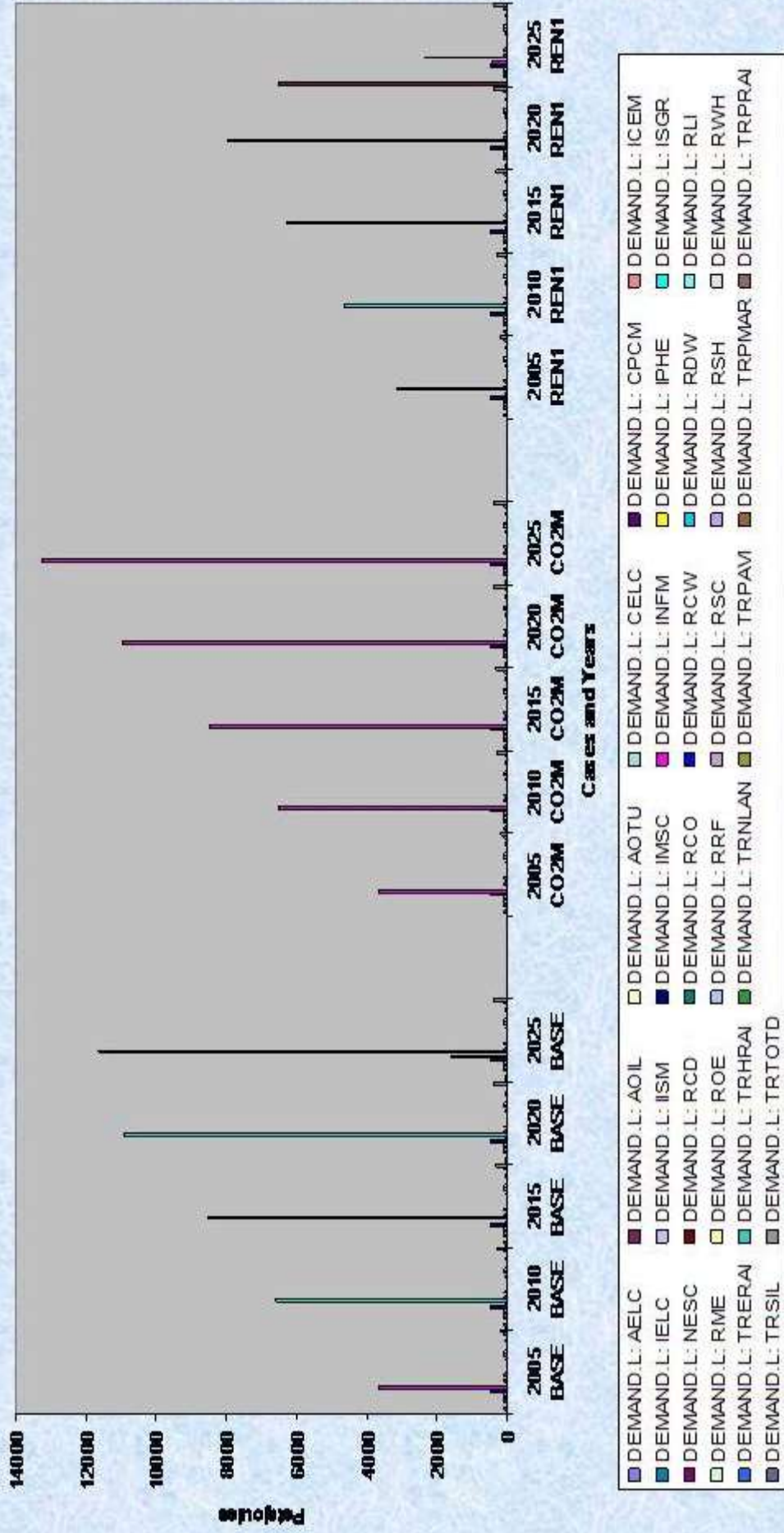
Total Final Energy : REGION1





Demands

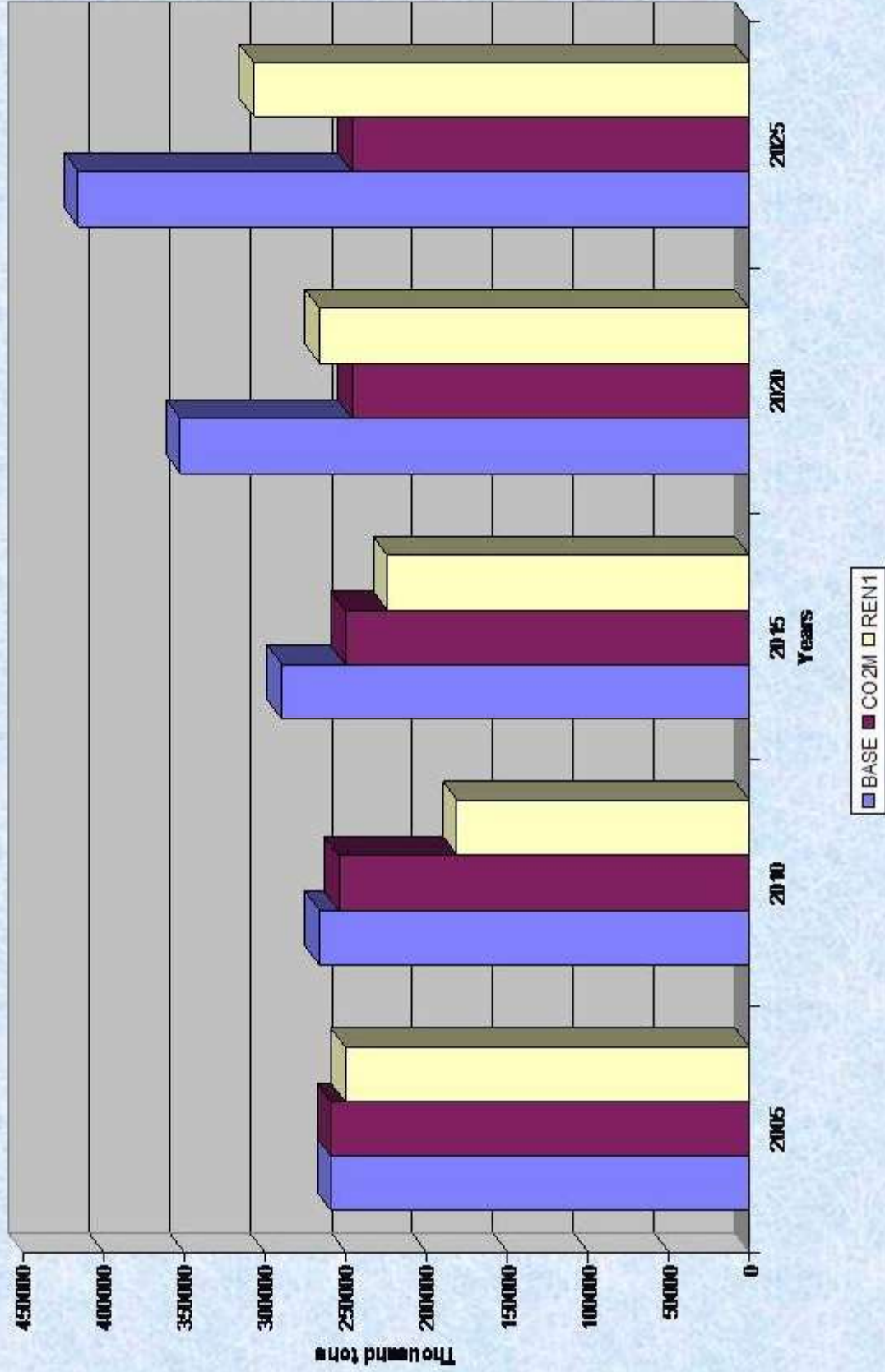
Region: REGION1





Emissions

Emission Level (Total All Technologies) : REG3DM1, CO2





Discounted Emissions Tax Revenues

Discounted Emissions Tax Revenues Total : REGION1

