

**INTERNATIONAL ENERGY WORKSHOP**  
**Part I: Overview of Poll Responses**  
**Part II: Frequency Distributions**

**Alan S. Manne**  
**Leo Schrattenholzer**

**January 1996**



International Institute for Applied Systems Analysis A-2361 Laxenburg Austria

Tel: +43 2236 807

Fax: +43 2236 71313

E-Mail: [info@iiasa.ac.at](mailto:info@iiasa.ac.at)



INTERNATIONAL ENERGY WORKSHOP  
Part I: Overview of Poll Responses

by  
Alan S. Manne  
Leo Schrattenholzer

January 1996

The following organizations have provided support for the work done on this report at the International Institute for Applied Systems Analysis and at Stanford University: Amoco Foundation, Center for Economic Policy Research (Stanford University), Electric Power Research Institute, and Pennsylvania Power & Light Company. The individual authors are solely responsible for the analysis presented here.



## Foreword

The International Energy Workshop is an informally organized group. Its general aim is to compare the most up-to-date long-term energy projections available throughout the world, and to obtain a better understanding of the reasons for their differences. For a general description, see the forthcoming paper "The 1995 International Energy Workshop: the Poll Results and a Review of Papers", *OPEC Review*, 1996, vol. XX.

Meetings of the IEW have been held at Stanford University (December 1981), IIASA (June 1983, 1985, 1987, 1989, 1991, 1993, and 1995), the International Association of Energy Economists (Denver - November 1982, San Francisco - November 1984, Boston - November 1986), the United Nations (New York - November 1983), the East-West Center (Honolulu - June 1988, 1990, and 1994), and Harvard University (June 1992).

The next meeting of the IEW is scheduled for June 25-27, 1996 at the Osaka University Convention Center. The meeting is jointly organized by the Japan Society of Energy and Resources (JSER) and IIASA. If you are not already on our mailing list for meeting announcements, please send in your name and address to Leo Schrattenholzer at IIASA.

## Contents of the January 1996 edition

This revision of the IEW poll contains three appendices. Frequency distributions including "business-as-usual" cases only are provided in Appendix I, individual poll responses for such cases in Appendix II, and individual responses on reduction scenarios in Appendix III. Reduction scenarios always include Poll item 19, Marginal Carbon Reduction Costs, but in some cases, but we have included cases with small (under US\$ 50 per ton of carbon) marginal reduction costs in the main group. These are raw statistical tabulations, and are intended as research material for further analysis.

The current edition of the IEW poll supersedes all previous ones, and contains only those poll responses bearing publication dates of 1993-1995. Each IEW respondent may provide more than one scenario, and may cover more than one geographical region. Altogether, this edition of the poll contains 264 individual responses on "business-as-usual" cases and 96 carbon emission reduction cases. Poll responses have been received from 60 participating organizations who submitted the results of 91 reference scenarios and 40 reduction scenarios. Approximately half of the responses bearing a publication date of 1993 and some responses with later publication dates have been taken over directly from CHALLENGE, a model comparison project. These responses include scenarios of carbon emissions abatement — and of the marginal costs of abatement.

The contents of this overview are organized into four major sections, and are paginated accordingly.

(A) Frequency distributions of international oil price projections published during

1993, 1994, and 1995. For comparative purposes, we also include a graph comparing the medians obtained during successive IEW polls.

(B) Frequency distributions of carbon emissions indices.

(C) A list of the poll respondents, together with their dates of publication and regional coverage.

(D) A list of the responses received for each region/nation and poll item. Appendix I contains frequency distributions for six standard IEW regions: (1) Former Soviet Union and Eastern Europe, (2) China, (4) OECD, (5) OPEC, (6) Non-OPEC Developing Countries, and (8) World, total. We no longer publish frequency distributions for region (3) Centrally Planned Economies and (7) Market Economies (pre-1990 definition). Frequency distributions are also provided for six individual countries/regions: Canada, Eastern Europe, Japan, OECD Europe, USA and former USSR. For most poll items, these each contain a sufficiently large number of responses so that it is meaningful to compare them in this way. Where the number of responses seems too small for producing meaningful histograms, no frequency distributions are included.

On each frequency distribution, the median response is marked with 'M'; in cases of an even number of responses for one poll item, the two responses adjacent to the median are marked. If there are more responses in one slot of a histogram than there is room in the diagram, this is indicated by the symbol '>'.>

Each response bears a date of publication. E.g., the one labelled AMOCH refers to AMOCO's high demand projections dated May 1993. The frequency distributions are identified in the upper right corner of each page. The first page is "SU/EE 2", the second is "SU/EE 3", etc. Both of these pages refer to the region Former USSR and Eastern Europe. The next group of pages refers to world region (2) China and so on.

Poll items 3-16 refer to individual fuel types: oil, gas, coal, renewables for electricity generation, nuclear, and renewables for non-electric uses. Of these, the three fossil fuels are expressed in terms of commercial primary energy consumption, production and net trade (exports minus imports). Poll item 17 is electricity generation. This is the only secondary energy form for which international projections appear comparable. Poll item 18 refers to carbon emissions, and item 19 to the marginal cost of carbon abatement. Results on these last two items are presented below, starting from page B-1.

According to the frequency distributions for poll item 16 (renewables for non-electric uses), there are wide variations in definitions from one organization to another. Some groups include noncommercial energy in this category, and others do not. In principle, the poll responses refer only to the statistical concept of commercial energy.

Oil prices are expressed in terms of 1990 U.S. dollars per barrel. Costs of abatement are expressed in 1990 U.S. dollars per ton of carbon. GNP growth is measured as an index number (1990=100) in currency units of constant purchasing power. In principle, each nation's or region's individual deflator is applied in order to arrive at the GNP indices.

Electricity generation is measured in TWh (terawatt-hours). All forms of primary energy are compared in terms of Mtoe (million tons of oil equivalent). The following represent useful approximations between Mtoe and other energy units:

1 Mtoe	~	$10^{13}$ kilocalories
0.65 Mtoe	~	1 million tons coal
0.83 Mtoe	~	1 billion cubic meters natural gas
23.5 Mtoe	~	1 quad BTU
22.5 Mtoe	~	1 exajoule ( $10^{18}$ joules)
50 Mtoe/yr	~	1 million barrels daily

In order to convert primary fossil fuels (tons of oil equivalent) into tons of carbon, the following are useful approximations<sup>1</sup>:

crude oil	~	0.85	tons C/mtoe
natural gas	~	0.62	tons C/mtoe
coal	~	1.10	tons C/mtoe

---

<sup>1</sup>OECD/IPCC, Estimation of Greenhouse Gas Emissions and Sinks, Final Report, August 1991, OECD, Paris.





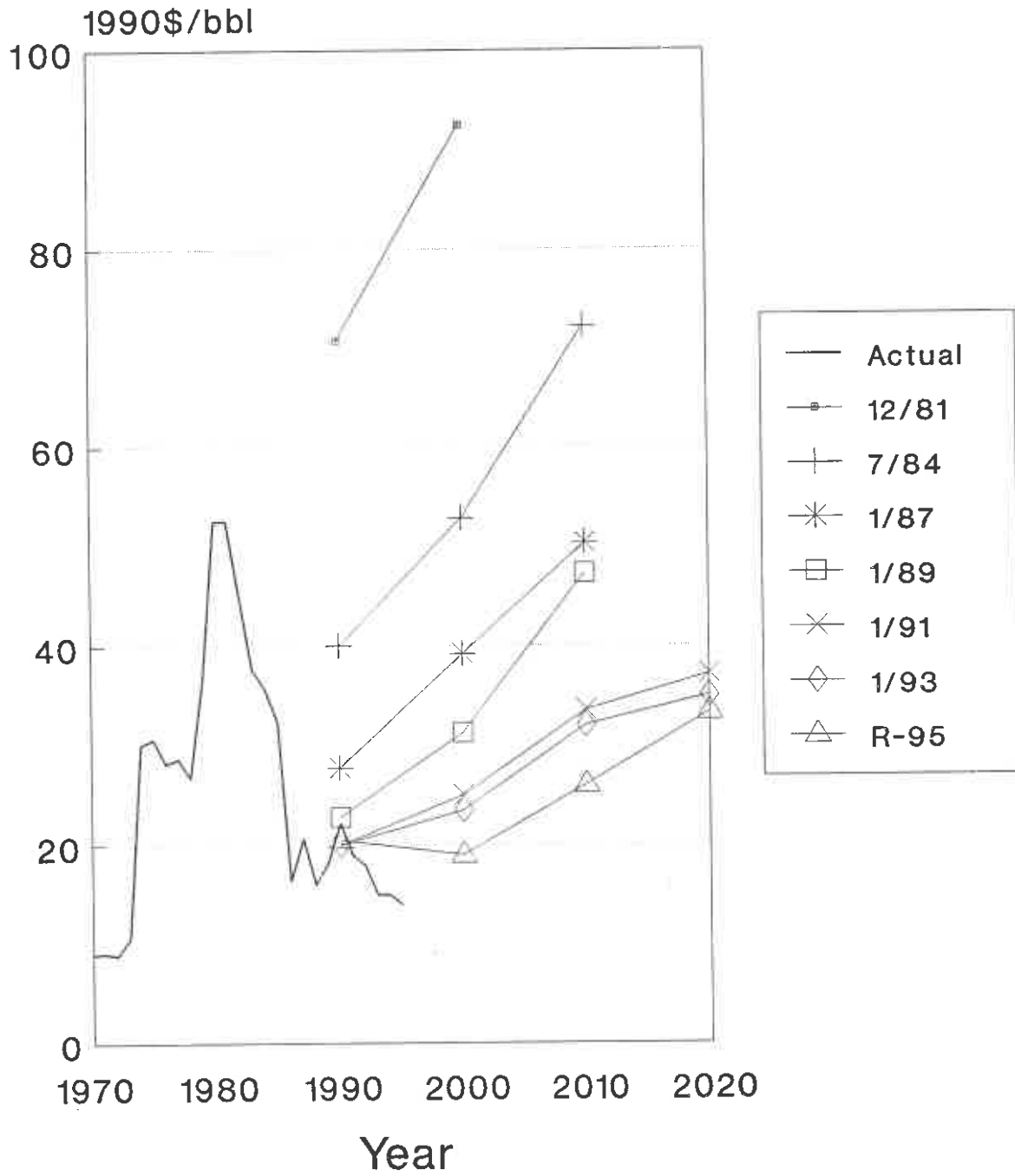
## **Oil Price Projections, 1993-95**

The following pages contain frequency distributions of international oil price projections published during the years 1993 through 1995.

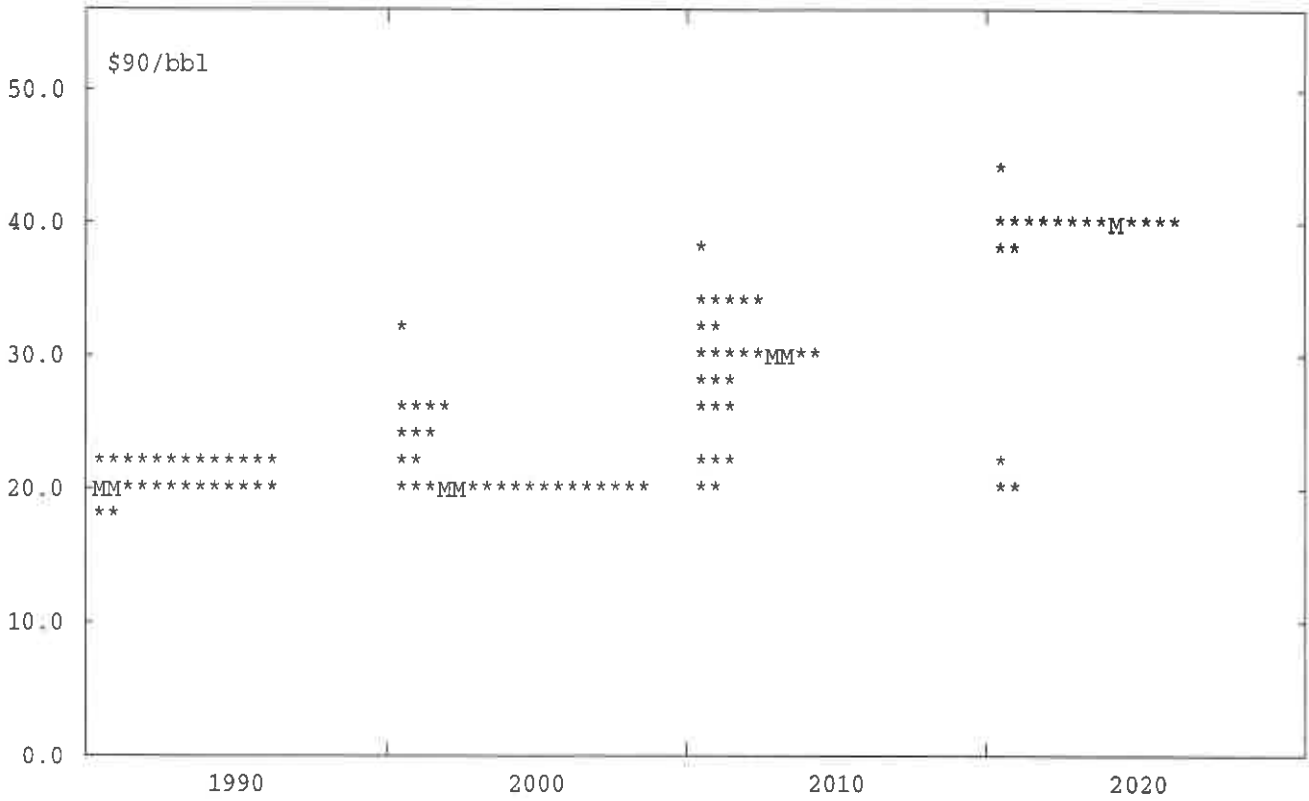
For comparative purposes, our first graph compares the medians for seven IEW polls. Six of these (Dec-81, Jul-84, Jan-87, Jan-89, Jan-91, and Jan-93) have been published in previous editions. The seventh (R-95) refers to the responses bearing a 1995 date of publication, and is taken from the pages that follow immediately below.

This graph provides clear evidence of an "adaptive expectations" process among energy analysts. That is, each year's long-term projections are heavily influenced by current prices and by trends during the recent past. This is why the date of publication is so significant in trying to understand why the individual responses differ from each other.

## Crude Oil Prices Actual and Successive IEW Polls

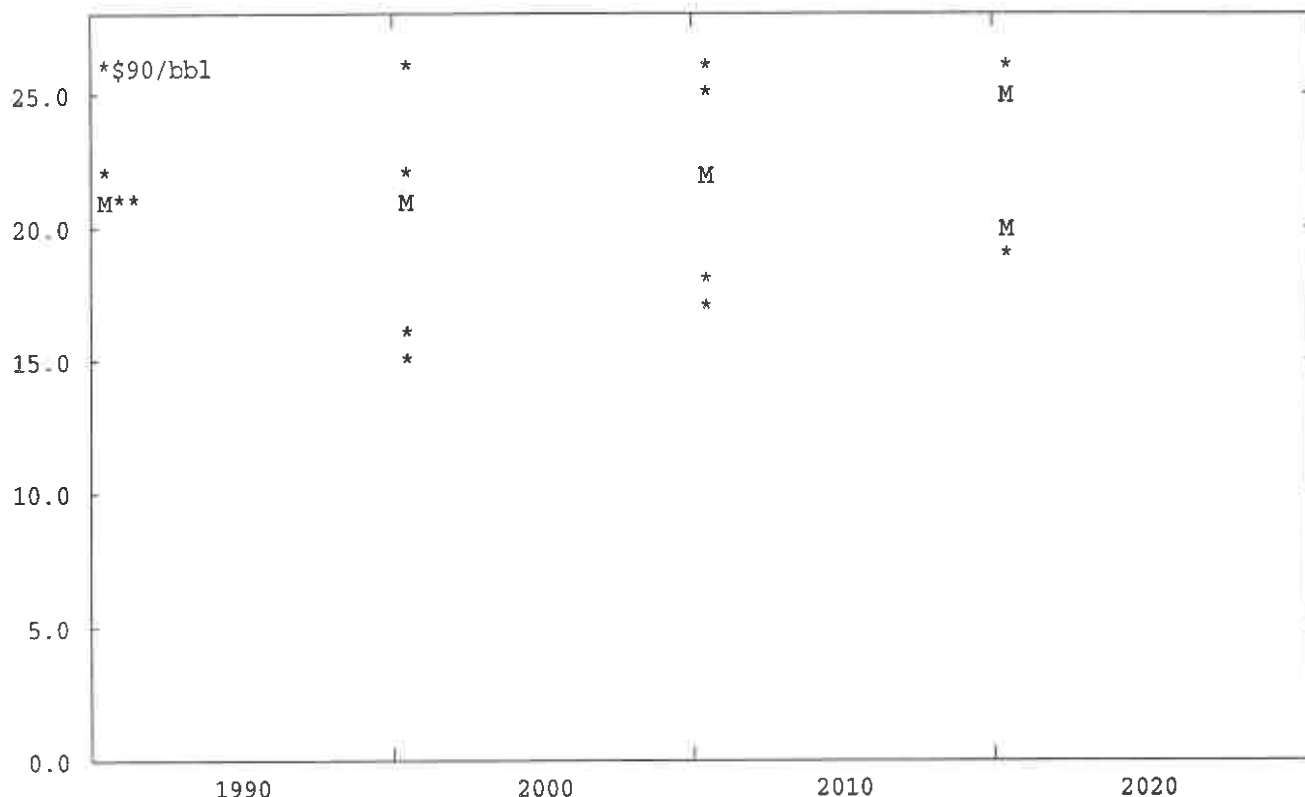


International Price of Crude Oil, Year 1993



Medians:	1990	2000	2010	2020
CNREF '93	22.7	31.0	37.0	44.0
GRI '93	22.1	26.0	34.9	40.0
LENUC '93	22.0	25.6	33.1	40.0
LELOW '93	22.0	25.6	33.1	40.0
LEREF '93	22.0	25.6	33.1	40.0
DRI '93	22.0	24.3	33.0	40.0
EMRH '93	21.9	23.4	32.0	40.0
EMRL '93	21.9	23.0	32.0	40.0
GRREF '93	21.0	21.6	30.0	40.0
ITREF '93	21.0	21.6	30.0	40.0
SIREA '93	21.0	20.7	30.0	40.0
SIOPT '93	21.0	20.7	30.0	39.0
CWREF '93	21.0	20.7	30.0	39.0
PLMCP '93	20.4	20.7	30.0	39.0
EBREF '93	20.1	20.0	30.0	38.2
BGTUL '93	20.0	20.0	30.0	37.7
BGTUH '93	20.0	20.0	30.0	21.0
ACREF '93	20.0	20.0	27.4	20.0
EGREF '93	20.0	20.0	27.4	20.0
LBL '93	20.0	20.0	27.4	
ENLO '93	20.0	20.0	26.1	
IWREF '93	20.0	20.0	25.5	
VEREF '93	20.0	20.0	25.0	
ENHI '93	20.0	20.0	22.4	
TSREF '93	20.0	20.0	22.4	
PLMIT '93	19.6	19.8	21.0	
OLADE '93	18.0	19.5	20.0	
FBAR '93	18.0	19.0	20.0	

International Price of Crude Oil, Year 1994

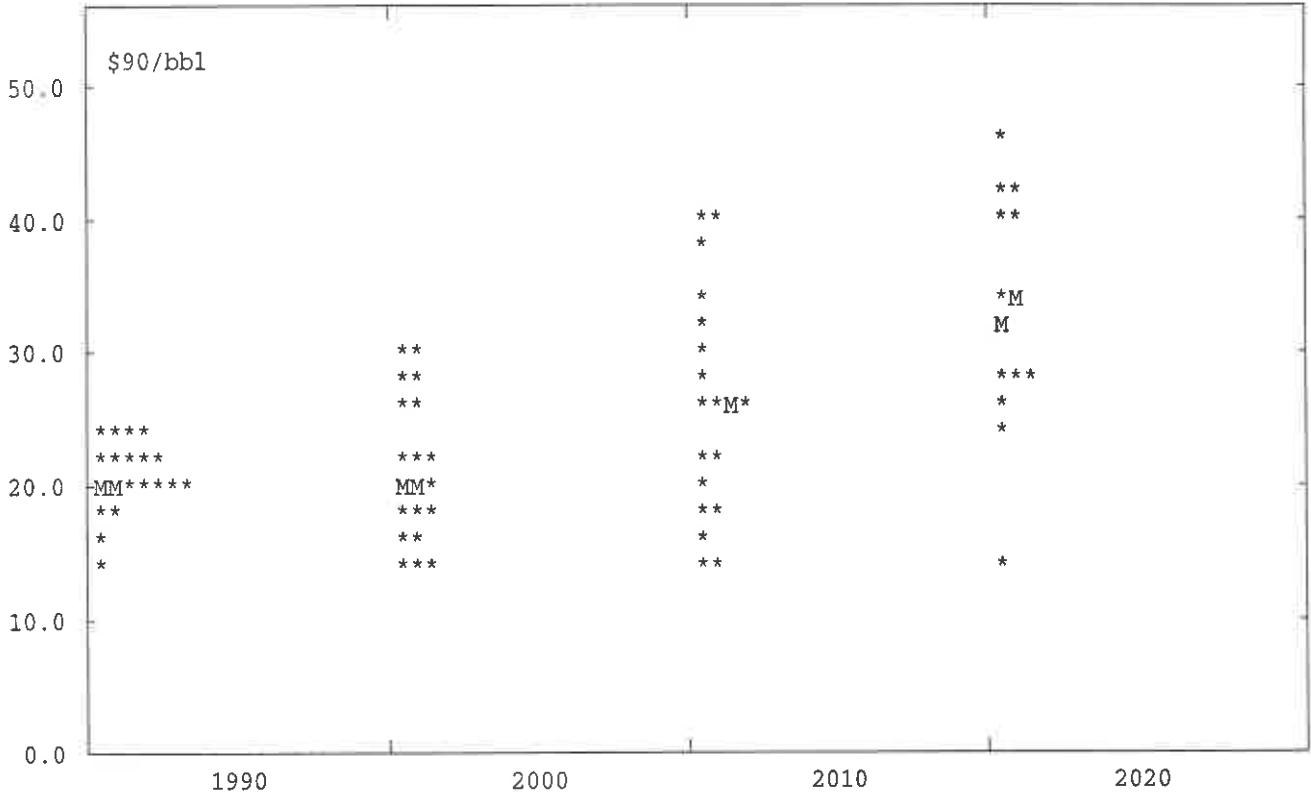


Medians:

1990	2000	2010	2020
21.3	20.9	22.1	22.4

IGIDR'94	26.0	IGIDR'94	26.0	IGIDR'94	26.0	IGIDR'94	26.0
IEA '94	22.2	NEREF'94	21.9	IEA '94	25.5	NEREF'94	24.8
ODELL'94	21.3	IEA '94	20.9	NEREF'94	22.1	LYNCH'94	20.0
NEREF'94	21.0	LYNCH'94	16.0	LYNCH'94	18.0	ODELL'94	19.3
LYNCH'94	20.5	ODELL'94	15.2	ODELL'94	16.8		

International Price of Crude Oil, Year 1995



Medians:

1990 20.5      2000 19.0      2010 26.0      2020 33.3

EUHM '95	23.0	PNREF'95	30.0	PNREF'95	40.0	ECSC '95	46.1
EUBF '95	23.0	PSREF'95	30.0	PSREF'95	40.0	ECSA '95	42.2
EUCW '95	23.0	ECSB '95	27.1	KNREF'95	38.0	ECSB '95	41.1
EUFO '95	23.0	KNREF'95	27.0	ECSB '95	34.2	PNREF'95	40.0
CECO '95	22.9	ECSA '95	26.0	ECSA '95	31.9	PSREF'95	40.0
OWREF'95	22.3	CUREF'95	25.0	CUREF'95	30.0	EGREF'95	34.1
BNREF'95	22.0	EGREF'95	22.6	EGREF'95	27.8	CUREF'95	34.0
EIA '95	21.8	ECSC '95	22.6	MERGE'95	26.8	MERGE'95	32.5
MERGE'95	21.0	MERGE'95	22.3	EUCW '95	26.0	EUCW '95	28.0
ABARE'95	20.9	EUCW '95	19.0	EUHM '95	26.0	EUHM '95	28.0
ECSA '95	20.0	EUHM '95	19.0	ECSC '95	25.1	BNREF'95	27.0
CUREF'95	20.0	EUBF '95	19.0	EIA '95	22.0	EUBF '95	25.0
ECSB '95	20.0	CECO '95	18.6	BNREF'95	21.5	OWREF'95	23.3
PNREF'95	20.0	BNREF'95	17.5	ABARE'95	20.0	EUFO '95	14.0
PSREF'95	20.0	EIA '95	17.4	EUBF '95	18.0		
ECSC '95	20.0	TEREF'95	16.2	OWREF'95	18.0		
EGREF'95	18.7	ABARE'95	15.8	TEREF'95	16.2		
KNREF'95	18.0	OWREF'95	14.4	EUFO '95	14.0		
TEREF'95	16.2	ADLMN'95	14.0	ADLMN'95	13.0		
ADLMN'95	14.9	EUFO '95	14.0				



## Carbon Emission Projections

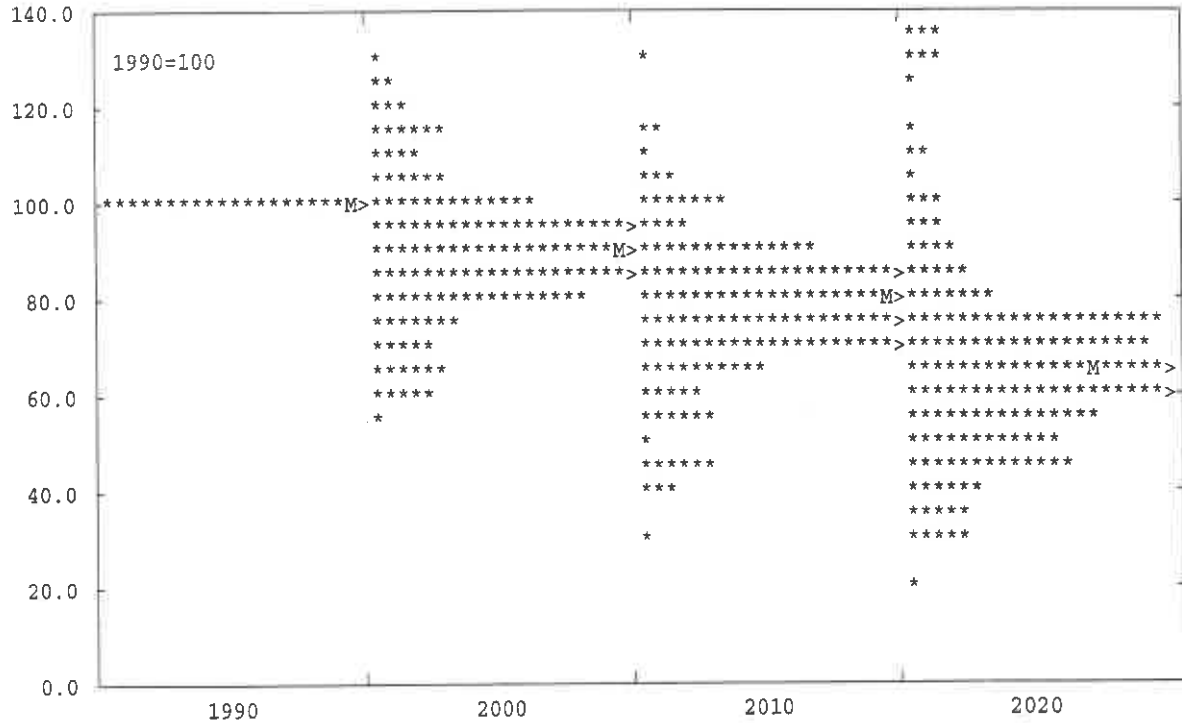
Mainly for 1993, but also in the other two years covered by this report, IEW poll responses include those collected within the CHALLENGE project. For details on the project, see our joint paper, "Global Scenarios for Carbon Dioxide Emissions", *Energy — the International Journal*, December 1993. In CHALLENGE, the emphasis was on scenarios of carbon emissions reduction relative to reference cases. To reflect this focus, we reproduce here three histograms on carbon emissions.

The first histogram shows, for the "business-as-usual" scenarios provided by our respondents, the evolution of carbon intensity of GDP (expressed as the carbon/GDP ratio with 1990 = 100). This unit make all responses comparable on a single graph. Note that there is a wide range of responses, and that the median index for 2020 is 64.1. That is, the combination of supply-side shifts and of energy conservation leads to a median decoupling rate of 1.5% per year between the growth of GDP and the growth of carbon emissions.

The second histogram refers to a selected group of controlled comparisons. The carbon intensities of total primary energy consumption in reference cases are each compared with scenarios in which a tax of \$200 per ton of carbon is imposed. (This formulation is logically equivalent to specifying maximum marginal abatement costs of \$200.) By 2020, such a tax would lead to a median reduction of carbon intensity of just over 25% in comparison with the reference case level of emissions.

The third histogram refers to the same group of controlled comparisons as the previous one. Here, the effect of the hypothetical carbon tax on total energy-related carbon emissions is shown. The median result is a 40% reduction of emissions relative to the reference cases by the year 2020.

Carbon/GDP Index (1990=100), all regions combined



Medians: 100.0 89.0 78.1 64.1

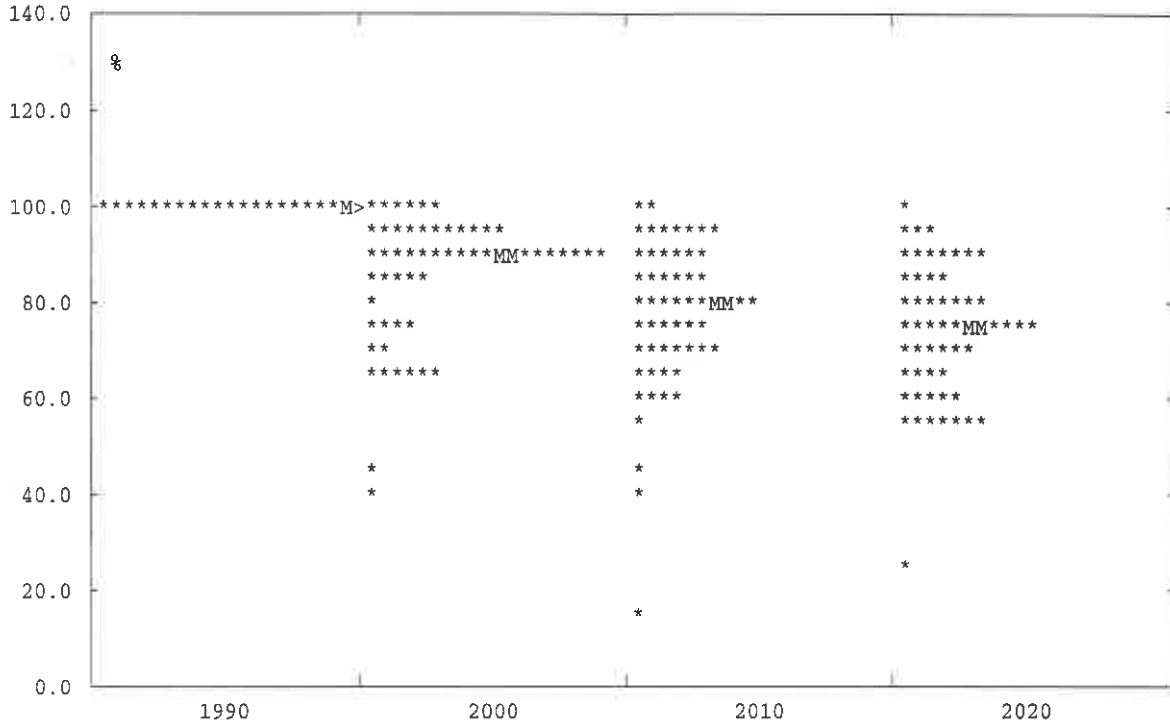
AMOCN USA	100.0	ISUNF USSR	130.5	IGIDR INDIA	128.4	WECB1 AFSS	135.0
ECSA A1	100.0	ISPRE USSR	126.9	YOHEH A8	114.8	IGIDR INDIA	133.2
AMOCN A2	100.0	ISREF USSR	126.4	KFAST INDON	114.1	WECA AFSS	132.8
ECSA USSR	100.0	SIREA USSR	120.7	OLADE LATAM	110.8	WECB1 LATAM	130.0
AMOCN CAN	100.0	TEREF INDIA	120.3	GRREF INDIA	104.9	WECA SASIA	129.5
BNREF USA	100.0	ECSA EEUR	118.3	ECCO UK	104.5	KFAST INDON	128.8
ECSA OECDP	100.0	MERGE USSR	117.2	ITREF EEC	103.5	WECB1 SASIA	123.4
AMOCN A4	100.0	EIA USSR	117.0	ITREF JAPAN	100.8	YOHEH A8	116.3
AMOCN A8	100.0	KEEI KOREA	114.2	GRREF A2	100.5	WECA LATAM	108.7
CNREF NLAND	100.0	ECSA A1	113.3	GRREF USSR	100.4	GRREF INDIA	108.1
AMOCN USSR	100.0	IGIDR INDIA	113.0	GRREF EEUR	100.0	ITREF EEC	104.6
CETA A8	100.0	ECSA USSR	112.5	ECSA USSR	99.3	WECB1 NAFME	99.9
CWREF OOECD	100.0	OLADE LATAM	111.1	YOHEB A8	98.7	GRREF A2	99.3
CWREF A1	100.0	ECSB OECDE	108.9	KEEI KOREA	98.3	GRREF EEUR	98.1
CECO UK	100.0	ECSC USSR	108.3	FBAR ARG	96.3	YOHEB A8	96.2
AMOCN A8	100.0	ECSA OECDE	107.6	ECSA A1	96.3	CUREF SWEDN	95.3
AMOCN CAN	100.0	EIA A1	105.5	GRREF A8	92.7	ITREF JAPAN	94.4
AMOCN USA	100.0	KFAST INDON	104.9	CUREF SWEDN	92.7	WECA NAFME	91.5
ECSA A4	100.0	ECSC A1	104.7	TEREF INDIA	92.3	GRREF USSR	88.9
ECSA OECDN	100.0	EIA UK	104.5	EIA USSR	92.3	GRREF A8	88.9
ACREF CHREP	100.0	SIOPT USSR	104.2	GRREF ROW12	92.0	ISUNF USSR	88.8
EGREF GRMNY	100.0	AMOCN USSR	103.0	ITREF A4	91.8	GRREF ROW12	87.4
AMOCN A1	100.0	ECSB EEUR	102.4	ECSB OECDE	91.8	GRREF ROECD	87.3
AMOCN A2	100.0	AMOCN USSR	102.1	ECSA OECDE	91.5	ITREF A4	85.5
EIA A2	100.0	FBAR ARG	102.0	GRREF ROECD	91.2	MERGE USA	83.7
EIA A4	100.0	ITREF EEC	101.5	ECSA EEUR	91.1	GRREF ENX	82.8
EIA A5	100.0	AMOCN A1	100.9	EIA UK	90.3	KEEI KOREA	81.4
CWREF USA	100.0	YOHEB A8	100.4	ITREF BRAZI	90.0	ECSA USSR	80.2
EIA CAN	100.0	BGTUH BULG	99.3	ITREF ROECD	89.5	MERGE A4	80.0
AMOCN A1	100.0	ECCO UK	98.6	BGTUH BULG	88.7	ENLO ITALY	79.7
EIA FRANC	100.0	ECSC OECDE	98.6	GRREF ENX	88.2	ITREF ROECD	79.2
AMOCN A4	100.0	BGTUL BULG	98.0	SIREA USSR	88.1	CWREF USA	78.2
EIA ITALY	100.0	OWREF A6	97.8	ECSC USSR	86.9	ECSB A8	77.7
EIA JAPAN	100.0	GRREF INDIA	97.6	MERGE A4	86.5	ECSB OECDE	77.1
AMOCN USSR	100.0	GRREF USSR	97.6	OWREF A6	86.4	GRREF EEC	76.6
EIA A8	100.0	EIA CAN	96.6	AMOCN A1	86.0	ITREF USA	76.3
BGTUH BULG	100.0	GRREF JAPAN	96.3	AMOCN USSR	85.7	EMRH CAN	76.2
BGTUL BULG	100.0	ECSC EEUR	96.0	ECSB EEUR	85.5	ECSA OECDE	75.9



EIA	USSR	100.0	OWREF	OECDP	96.0	GRREF	DAE	85.3	OWREF	A5	75.5
EMRH	CAN	100.0	AMOC	A1	95.9	ITREF	USA	85.2	ECSA	A8	75.4
EMRL	CAN	100.0	ITREF	ROECD	95.7	MERGE	USA	85.2	NEREF	AFME	75.3
ENHI	ITALY	100.0	OWREF	A5	95.6	ECSA	A8	84.6	BNREF	USA	74.9
ENLO	ITALY	100.0	ECSB	A1	95.2	OWREF	A5	84.4	GRREF	DAE	74.5
CUREF	SWEDN	100.0	EIA	FRANC	95.2	CWREF	USA	84.0	ITREF	DAE	74.2
EUBF	EU15	100.0	YOHEH	A8	95.2	ECSB	A8	84.0	ITREF	A8	74.2
EUBF	A8	100.0	GRREF	EEUR	95.2	ECSC	A1	83.8	WECC	SASIA	74.1
EUCW	EU15	100.0	EIA	OECD	95.0	BGTUL	BULG	83.4	GRREF	USA	73.6
EUCW	A8	100.0	GRREF	ROW12	94.7	AMOC	USA	83.4	CWREF	DC	73.3
EUFO	EU15	100.0	AMOC	CAN	94.7	ECSB	A1	83.1	ECSA	A1	73.3
EUFO	A8	100.0	ITREF	BRAZI	94.6	ECSB	USSR	83.0	WECC	NAFME	73.1
EIA	NLAND	100.0	GRREF	A2	94.4	EMRH	CAN	82.9	CETA	A8	72.9
EIA	OECD	100.0	GRREF	A8	94.4	EIA	ITALY	82.6	WECC	LATAM	72.6
ABARE	AUS	100.0	AMOC	USA	94.3	GRREF	EEC	82.6	ISUNF	EEUR	72.5
EGREF	POL	100.0	ITREF	JAPAN	94.1	EIA	CAN	82.3	MERGE	A8	72.5
FBAR	ARG	100.0	EIA	ITALY	94.0	EIA	OECD	82.3	WECC1	PACW	72.2
EGREF	OST	100.0	GRREF	DAE	94.0	EIA	FRANC	82.3	BGTUH	BULG	72.2
EIA	A1	100.0	GRREF	ROECD	94.0	EIA	A1	82.2	PSREF	SWISS	72.0
GRREF	JAPAN	100.0	ECSB	USSR	93.8	AMOC	CAN	82.0	OWREF	A6	71.8
GRREF	EEC	100.0	ITREF	A4	93.8	GRREF	USA	81.6	CWREF	A8	71.5
GRREF	ROECD	100.0	AMOC	CAN	93.1	ECSB	A4	80.8	ENHI	ITALY	71.5
GRREF	ENX	100.0	EIA	NLAND	92.9	OWREF	OECDP	80.7	ECSB	A4	70.5
GRREF	A2	100.0	GRREF	ENX	92.8	ECSA	A4	80.6	YOHEL	A8	70.3
GRREF	USSR	100.0	ECSB	A4	92.6	ITREF	A8	80.4	GRREF	JAPAN	69.1
GRREF	INDIA	100.0	ECSA	A8	92.4	EIA	NLAND	80.3	SIREA	USSR	68.8
GRREF	EEUR	100.0	ECSA	A4	92.3	CWREF	DC	80.0	EGREF	OST	68.7
GRREF	DAE	100.0	AMOC	A8	91.9	AMOC	CAN	79.9	ECSB	EEUR	68.7
GRREF	BRAZI	100.0	MERGE	USA	91.8	CETA	A8	79.8	ECSA	A4	68.5
GRREF	ROW12	100.0	EIA	JAPAN	91.7	EIA	A4	79.8	ECSB	USSR	68.2
GRREF	A8	100.0	AMOC	A8	91.7	GRI	USA	79.8	ECSB	A1	68.1
EIA	UK	100.0	MERGE	A4	91.5	KNREF	JAPAN	79.5	ECSB	OECDN	67.9
EIA	USA	100.0	EIA	A4	91.5	ITREF	DAE	79.5	WECA	PACW	67.7
ECSB	A1	100.0	EIA	A8	91.1	AMOC	A8	79.5	CWREF	A4	67.6
ECSB	OECD	100.0	PLMIT	POL	90.9	SIOPT	USSR	79.2	CNREF	NLAND	67.0
ECSB	A8	100.0	OWREF	A4	90.8	EIA	USA	79.2	WECC	AFSS	66.8
ECSC	EEUR	100.0	ENLO	ITALY	90.6	AMOC	USSR	79.1	OWREF	OECDN	66.6
ECSC	USSR	100.0	GRREF	EEC	90.5	AMOC	A8	78.8	OWREF	OECD	66.2
ECSC	A4	100.0	ECSB	A8	90.3	CWREF	A8	78.7	EUBF	A8	65.9
ECSC	OECDN	100.0	ITREF	USA	90.2	EIA	A8	78.7	WECC	NAFME	65.9
ECSC	OECDP	100.0	CWREF	USA	90.2	EGREF	OST	78.7	ECSA	OECDN	65.8
ECSC	A1	100.0	OWREF	OECDN	90.1	EIA	JAPAN	78.5	OWREF	OECDP	65.6
ECSC	OECD	100.0	AMOC	A4	89.8	YOHEL	A8	78.4	OWREF	A4	65.6
ECSC	A8	100.0	YOHEL	A8	89.6	MERGE	A8	78.3	ITREF	EEUR	65.2
IGIDR	INDIA	100.0	KNREF	JAPAN	89.6	OWREF	A4	77.9	ISREF	EEUR	65.2
EUHM	EU15	100.0	BGREF	POL	89.5	EMRL	CAN	77.9	WECC1	A8	65.0
INETL	A2	100.0	ISREF	EEUR	89.2	AMOC	A1	77.8	WECC1	USSR	64.3
ISPRE	EEUR	100.0	GRREF	USA	89.0	OWREF	OECDN	77.8	BGTUL	BULG	64.3
ISPRE	USSR	100.0	EMRH	CAN	89.0	ENLO	ITALY	77.7	WECC	LATAM	64.1
ISREF	EEUR	100.0	EMRL	CAN	89.0	GRREF	JAPAN	77.7	OWREF	A8	63.8
ISREF	USSR	100.0	GRREF	BRAZI	88.9	PSREF	SWISS	77.5	ISREF	USSR	63.6
ISUNF	EEUR	100.0	ABARE	AUS	88.8	OWREF	OECD	77.3	EUCW	A8	63.5
ISUNF	USSR	100.0	OWREF	A8	88.8	ABARE	AUS	76.9	EUBF	EU15	63.3
ITREF	USA	100.0	OWREF	OECD	88.7	CWREF	A4	76.5	WECA	A8	63.0
ITREF	JAPAN	100.0	AMOC	USA	88.3	ECSC	EEUR	75.9	NEREF	LATAM	62.8
ITREF	EEC	100.0	MERGE	A8	88.3	OWREF	A8	75.8	PNREF	SWISS	62.6
ITREF	ROECD	100.0	CUREF	SWEDN	88.2	ECSC	OECD	75.8	ITREF	ROW12	62.4
ITREF	ENX	100.0	ISUNF	EEUR	88.2	ECSB	OECDN	75.7	ISPRE	USSR	61.9
ITREF	A2	100.0	CWREF	A1	88.1	EIA	GRMNY	75.7	CWREF	A1	61.7
ITREF	USSR	100.0	EIA	USA	88.0	BNREF	USA	75.6	EUHM	A8	61.6
ITREF	INDIA	100.0	AMOC	A4	87.7	AMOC	A4	75.5	GRREF	BRAZI	61.2
ITREF	EEUR	100.0	EIA	A5	87.5	GRREF	BRAZI	75.4	EUCW	EU15	61.2
ITREF	DAE	100.0	ECSA	OECDP	87.3	ECSA	OECDP	75.4	ITREF	ENX	61.0
ITREF	BRAZI	100.0	GRI	USA	86.8	ECSC	OECDN	75.4	NEREF	A8	60.8
ITREF	ROW12	100.0	EBREF	BELGM	86.6	CNREF	NLAND	75.3	NEREF	A2	60.4
ITREF	A4	100.0	ECSB	OECDP	86.6	ECSB	OECDP	74.7	ECSA	EEUR	60.3
ITREF	A8	100.0	CWREF	DC	86.5	EUBF	A8	74.7	ECSB	OECDP	59.8
IWREF	OST	100.0	ITREF	EEUR	86.4	ITREF	EEUR	74.6	ECSC	USSR	59.6
KEEI	KOREA	100.0	PSREF	SWISS	86.4	CWREF	A1	73.8	SIOPT	USSR	59.4
KFAST	INDON	100.0	CWREF	A8	86.4	EUBF	EU15	73.3	EBREF	BELGM	59.2
KNREF	JAPAN	100.0	PNREF	SWISS	86.2	EIA	A5	73.1	WECC	PACW	59.0
LBL	A2	100.0	CETA	A8	86.2	EUCW	A8	72.7	ITREF	A2	59.0
LELOW	LITHU	100.0	EIA	GRMNY	86.2	NEREF	AFME	72.3	ECSC	A8	58.8
LENUC	LITHU	100.0	BNREF	USA	86.2	ECSC	A8	72.3	ECSA	OECDP	58.4
LEREF	LITHU	100.0	CWREF	A4	86.0	NEREF	A2	72.2	ECSC	A1	58.3

CWREF A2	100.0	ITREF DAE	85.9	ITREF ROW12	72.2	EUHM EU15	58.1
CWREF DC	100.0	ENHI ITALY	85.6	PNREF SWISS	72.0	ITREF BRAZI	57.9
CWREF A8	100.0	NEREF A2	85.5	ENHI ITALY	71.8	CWREF OOECD	57.7
CWREF A4	100.0	ITREF A8	85.5	AMOCL USA	71.8	NEREF AFSS	57.4
EUHM A8	100.0	ECSC OECN	85.4	NEREF LATAM	71.4	NEREF JAPAN	57.2
EWBAU A2	100.0	ECSC A8	85.4	EUHM A8	71.0	CWREF A2	57.2
EWPOL A2	100.0	ECSC OECN	85.3	PLMIT POL	70.7	EUFO A8	57.1
EBREF BELGM	100.0	EUBF EU15	85.0	LELOW LITHU	70.4	NEREF OECDE	56.9
GRI USA	100.0	ISPRE EUR	84.9	EUCW EU15	70.4	ECSC OECDE	56.5
GRREF USA	100.0	LELOW LITHU	84.9	NEREF A8	70.3	STPET RUS	56.2
ECCO UK	100.0	NEREF LATAM	84.6	AMOCL A4	70.2	MERGE A2	56.0
ECSCA EUR	100.0	EGREF OST	84.4	EUFO A8	69.5	NEREF SEASI	55.8
MERGE USA	100.0	EUCW EU15	84.0	CWREF OOECD	69.4	WECC SASIA	55.2
MERGE USSR	100.0	EUCW A8	84.0	STPET RUS	69.2	ECSC EUR	55.0
MERGE A2	100.0	EUBF A8	83.8	NEREF SEASI	68.7	WECA OECDE	53.8
MERGE A4	100.0	EUFO A8	83.8	EUHM EU15	68.5	NEREF OECN	53.5
MERGE A8	100.0	VEREF HNGRY	83.3	EBREF BELGM	68.4	WECC A8	53.1
ECSCA OECDE	100.0	EUHM A8	82.9	NEREF OECN	68.2	WECC AFSS	52.7
ECSCA A8	100.0	EUHM EU15	82.6	NEREF AFSS	68.1	LBL A2	52.2
ECSCB EUR	100.0	CNREF NLAND	82.5	EGREF POL	67.3	WECC OECDE	51.9
ECSCB USSR	100.0	NEREF SEASI	82.4	ITREF A2	66.7	WECA USSR	51.8
ECSCB A4	100.0	CWREF OOECD	82.4	NEREF JAPAN	66.3	WECA EUR	50.4
ECSCB OECN	100.0	ITREF A2	82.2	NEREF OECDE	66.0	WECC1 OECDE	50.0
ECSCB OECDP	100.0	ITREF ROW12	82.0	CWREF A2	65.8	ACREF CHREP	49.7
NEREF ANZ	100.0	NEREF JAPAN	81.7	ITREF ENX	64.5	WECC1 EUR	49.3
NEREF A1	100.0	NEREF AFSS	81.5	LBL A2	64.4	WECC A2	49.0
NEREF A2	100.0	NEREF OECN	81.4	ACREF CHREP	63.4	MERGE USSR	48.9
NEREF A8	100.0	STPET RUS	81.2	IWREF OST	62.8	WECA OECN	48.7
NEREF JAPAN	100.0	ECSC A4	81.2	ITREF INDIA	62.5	WECC USSR	48.3
NEREF LATAM	100.0	NEREF A8	80.2	ECSC A4	62.2	WECC1 A2	48.2
NEREF AFME	100.0	EUFO EU15	80.2	MERGE A2	61.8	WECC OECN	47.1
NEREF OECDE	100.0	CECO UK	78.8	ECSC OECDP	61.4	ECSC A4	45.8
NEREF OECN	100.0	ECSC OECDP	78.3	MERGE USSR	59.9	ITREF USSR	45.7
NEREF SEASI	100.0	ITREF ENX	78.3	EUFO EU15	59.7	EGREF POL	45.5
NEREF AFSS	100.0	MERGE A2	77.8	EIA EUR	57.2	WECC EUR	45.0
NSUWG A2	100.0	CWREF A2	77.5	NEREF A1	56.2	WECC1 OECN	44.9
INETH A2	100.0	ACREF CHREP	77.4	ECSC OECN	55.3	ITREF INDIA	44.4
OLADE LATAM	100.0	PLMCP POL	76.9	ITREF USSR	53.3	EUFO EU15	44.2
OWREF OECN	100.0	NEREF OECDE	76.1	NEREF ANZ	52.9	WECC PACW	44.2
OWREF OECDE	100.0	IWREF OST	75.9	VEREF HNGRY	52.6	NEREF A1	43.3
OWREF OECDP	100.0	EIA EUR	75.4	EGREF GRMNY	48.2	ISPRE EUR	43.1
OWREF A4	100.0	LBL A2	74.1	TSREF A2	45.8	ECSC OECDP	43.0
OWREF A5	100.0	ECSC OECN	73.0	AMOCL A2	45.6	WECA A2	42.9
OWREF A6	100.0	ITREF INDIA	71.6	EIA A2	45.6	WECC A2	40.8
OWREF A8	100.0	NEREF A1	69.8	LEREF LITHU	43.6	ECSC OECN	40.6
PLMCP POL	100.0	NEREF ANZ	68.7	NSUWG A2	43.5	WECC A8	40.3
PLMIT POL	100.0	AMOCL A2	68.6	PLMCP POL	43.4	NEREF ANZ	40.0
PNREF SWISS	100.0	NEREF AFME	68.4	LENUC LITHU	42.3	EGREF GRMNY	39.5
EIA EUR	100.0	EWBAU A2	67.1	INETL A2	40.1	EWBAU A2	37.8
PSREF SWISS	100.0	TSREF A2	66.0	AMOCH A2	38.9	WECC USSR	36.9
EIA GRMNY	100.0	EWPOL A2	65.7	INETH A2	32.2	WECC EUR	35.0
SIOPT USSR	100.0	ITREF USSR	65.0			VEREF HNGRY	33.9
SIREA USSR	100.0	EGREF GRMNY	64.8			EWPOL A2	32.9
STPET RUS	100.0	AMOCH A2	63.7			TSREF A2	32.6
TEREF INDIA	100.0	EIA A2	62.3			PLMCP POL	32.3
TSREF A2	100.0	NSUWG A2	61.2			WECC OECDE	31.8
VEREF HNGRY	100.0	LEREF LITHU	59.5			NSUWG A2	31.3
WECA A2	100.0	INETL A2	59.4			WECC OECN	30.4
WECA A8	100.0	LENUC LITHU	58.5			INETL A2	29.5
WECA EUR	100.0	INETH A2	52.7			INETH A2	21.3
WECA LATAM	100.0						
WECA NAFME	100.0						
WECA OECDE	100.0						
WECA OECN	100.0						
WECA PACW	100.0						
WECA SASIA	100.0						
WECA AFSS	100.0						
WECA USSR	100.0						
WECC A2	100.0						
WECC A8	100.0						
WECC EUR	100.0						
WECC LATAM	100.0						
WECC NAFME	100.0						
WECC OECDE	100.0						
WECC OECN	100.0						

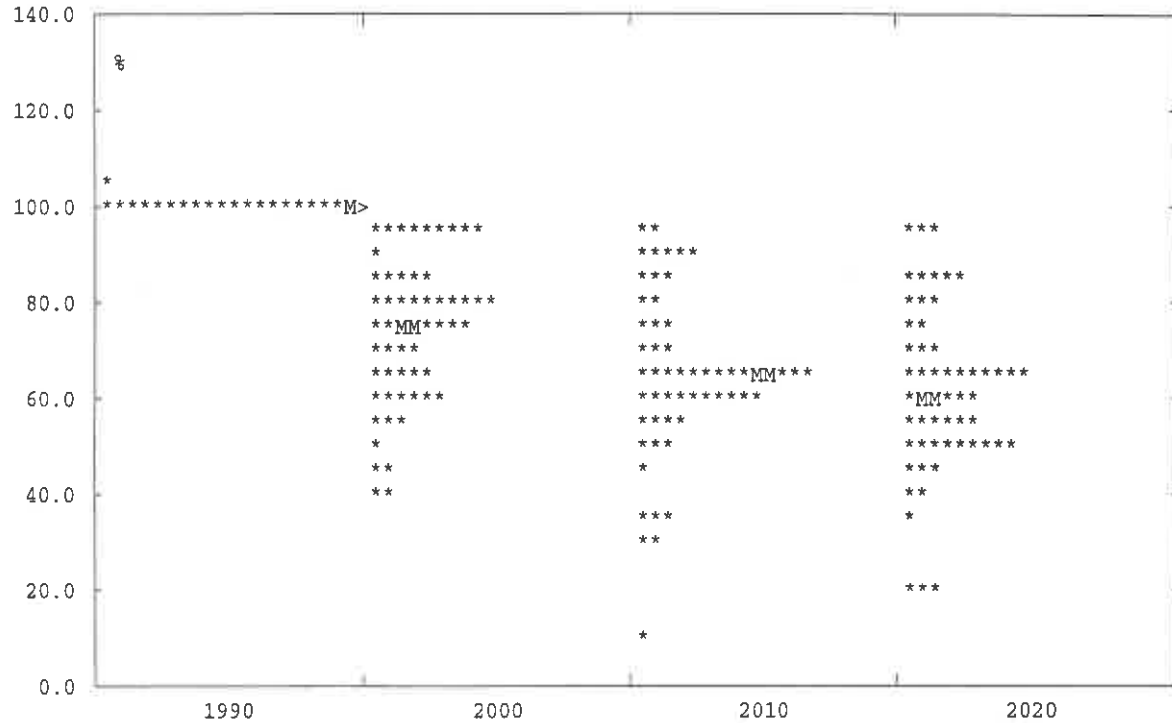
Carbon Intensity of TPE Relative to Reference, all regions combined



Medians:	1990	2000	2010	2020
EB200 BELGM	100.0	98.7	99.0	98.7
IT200 USSR	100.0	98.5	98.1	96.2
IT200 USA	100.0	98.0	96.9	95.8
IT200 A2	100.0	98.0	94.1	95.1
IT200 EEC	100.0	97.7	94.1	90.7
IT200 ROECD	100.0	97.6	93.8	89.9
IT200 ENX	100.0	97.5	93.4	89.6
CW200 A8	100.0	97.5	93.2	89.1
CW200 A4	100.0	97.3	93.0	88.4
CW200 USA	100.0	96.5	92.5	87.8
CW200 OOECD	100.0	96.0	92.2	87.8
CW200 A1	100.0	95.3	92.1	87.5
CW200 A2	100.0	95.2	91.8	84.6
CW200 DC	100.0	94.9	90.3	83.6
CN200 NLAND	100.0	94.0	90.1	83.3
GR200 ROW12	100.0	94.0	86.3	82.1
IW200 OST	100.0	93.1	86.2	80.7
IT200 JAPAN	100.0	92.2	85.7	80.6
GR200 USA	100.0	91.9	85.4	80.1
GR200 JAPAN	100.0	91.8	85.3	78.3
GR200 EEC	100.0	91.5	82.8	78.2
GR200 ROECD	100.0	91.4	82.2	78.0
GR200 ENX	100.0	91.1	81.6	76.4
IT200 INDIA	100.0	91.1	81.6	76.3
IT200 EEUR	100.0	90.8	81.6	75.5
IT200 DAE	100.0	90.8	81.5	75.5
IT200 BRAZI	100.0	90.8	81.4	74.8
IT200 ROW12	100.0	90.2	80.8	74.8
IT200 A4	100.0	89.5	79.7	74.3
IT200 A8	100.0	89.5	79.0	73.8
GR200 A8	100.0	89.2	78.4	73.1
CU200 SWEDN	100.0	89.0	76.5	72.7
EG200 POL	100.0	88.1	75.5	72.6
EG200 GRMNY	100.0	88.0	75.1	72.3
EG200 OST	100.0	87.9	75.0	72.1
PN200 SWISS	100.0	87.6	74.5	70.7
PS200 SWISS	100.0	87.1	72.9	68.8
GR200 A2	100.0	86.6	72.5	68.4

GR200 USSR	100.0	GR200 INDIA	86.3	NE200 OECDE	70.7	GR200 INDIA	68.3
GR200 INDIA	100.0	IT200 USSR	84.2	IT200 A4	70.1	NE200 A8	67.1
GR200 EUR	100.0	GR200 ROECD	82.7	IT200 USSR	69.7	IT200 A2	66.6
GR200 DAE	100.0	IT200 ROW12	78.5	IT200 EEC	67.8	IT200 A8	65.5
GR200 BRAZI	100.0	NE200 OECDE	76.1	NE200 LATAM	67.6	NE200 A1	64.2
TS200 A2	100.0	NE200 AFME	74.8	GR200 JAPAN	67.6	IT200 USA	61.9
BN200 USA	100.0	NE200 A2	74.2	IT200 ROECD	67.2	IT200 DAE	60.7
NE200 OECDP	100.0	IT200 ROECD	73.0	IT200 ROW12	65.4	IT200 A4	60.7
NE200 A1	100.0	NE200 OECDP	69.6	NE200 A8	64.0	IT200 EEC	58.1
NE200 A2	100.0	NE200 A8	69.1	NE200 AFME	63.9	GR200 JAPAN	57.9
NE200 A8	100.0	NE200 OECDN	66.1	IT200 JAPAN	62.3	IT200 ROW12	57.0
NE200 JAPAN	100.0	NE200 A1	66.1	NE200 A1	61.6	NE200 SEASI	56.6
NE200 LATAM	100.0	BN200 USA	65.8	BN200 USA	59.4	IT200 INDIA	54.2
NE200 AFME	100.0	NE200 SEASI	65.4	NE200 SEASI	59.3	IT200 JAPAN	54.0
NE200 OECDE	100.0	NE200 LATAM	63.9	NE200 OECDN	55.3	NE200 OECDN	54.0
NE200 OECDN	100.0	IT200 INDIA	62.8	IT200 INDIA	43.8	NE200 AFSS	53.7
NE200 SEASI	100.0	NE200 AFSS	47.4	NE200 AFSS	42.0	BN200 USA	53.1
NE200 AFSS	100.0	IT200 BRAZI	41.5	IT200 BRAZI	12.9	IT200 BRAZI	26.4

Carbon Emissions Relative to Reference, all regions combined



Medians: 1990 100.0 2000 76.0 2010 63.8 2020 59.1

BN200 USA	103.9	PS200 SWISS	97.4	PN200 SWISS	96.8	PN200 SWISS	94.7
PS200 SWISS	100.1	PN200 SWISS	97.2	TS200 A2	95.4	TS200 A2	93.7
EB200 BELGM	100.0	CN200 NLAND	96.9	CU200 SWEDN	91.3	CU200 SWEDN	93.1
IT200 A2	100.0	EG200 OST	96.4	EG200 GRMNY	90.7	IW200 OST	87.4
IT200 EEC	100.0	EG200 GRMNY	95.9	IW200 OST	90.1	EG200 OST	86.0
IT200 ROECD	100.0	TS200 A2	95.3	PS200 SWISS	90.0	IT200 ENX	85.6
IT200 ENX	100.0	EG200 POL	95.1	EG200 OST	88.5	EG200 GRMNY	84.7
CW200 A8	100.0	CU200 SWEDN	94.4	IT200 ENX	86.6	PS200 SWISS	83.7
IT200 USSR	100.0	IW200 OST	93.8	EB200 BELGM	86.3	EB200 BELGM	82.2
CW200 USA	100.0	IT200 EEC	88.5	EG200 POL	83.3	CW200 A1	79.3
CW200 OOECD	100.0	IT200 EEUR	86.4	CW200 A1	80.2	EG200 POL	77.6
CW200 A1	100.0	EB200 BELGM	86.2	CN200 NLAND	78.8	NE200 JAPAN	76.3
CW200 A2	100.0	IT200 JAPAN	86.1	IT200 EEUR	77.0	GR200 BRAZI	73.8
CW200 DC	100.0	IT200 ENX	83.0	NE200 JAPAN	76.8	NE200 LATAM	69.8
CN200 NLAND	100.0	CW200 DC	82.5	GR200 BRAZI	76.0	NE200 A2	68.1
GR200 ROW12	100.0	CW200 A1	81.8	IT200 DAE	68.9	IT200 ROECD	67.7
IW200 OST	100.0	CW200 A2	81.5	CW200 A8	68.2	IT200 USSR	65.5
IT200 JAPAN	100.0	CW200 A8	81.0	CW200 DC	67.7	CN200 NLAND	65.3
GR200 USA	100.0	CW200 USA	80.6	CW200 USA	66.6	NE200 OECDP	65.3
GR200 JAPAN	100.0	CW200 A4	79.8	GR200 EEC	66.4	NE200 AFME	64.6
GR200 EEC	100.0	IT200 A4	79.6	CW200 A4	66.0	CW200 A8	63.9
GR200 ROECD	100.0	CW200 OOECD	78.8	GR200 JAPAN	65.6	CW200 OOECD	63.6
GR200 ENX	100.0	NE200 JAPAN	78.8	NE200 OECDP	65.5	IT200 EEUR	63.3
IT200 INDIA	100.0	GR200 BRAZI	78.2	NE200 LATAM	65.5	CW200 A4	63.2
IT200 EEUR	100.0	GR200 EEC	77.5	CW200 OOECD	65.3	NE200 OECDE	63.1
IT200 DAE	100.0	IT200 A8	77.4	IT200 A2	64.8	CW200 USA	63.0
IT200 BRAZI	100.0	IT200 DAE	77.3	IT200 EEC	64.4	CW200 DC	59.7
IT200 ROW12	100.0	GR200 JAPAN	76.8	GR200 DAE	64.1	GR200 EEC	59.5
IT200 A4	100.0	IT200 USA	75.1	IT200 A8	63.4	GR200 DAE	58.7
IT200 A8	100.0	IT200 A2	75.1	IT200 USA	63.4	NE200 A8	58.6
GR200 A8	100.0	IT200 USSR	75.1	IT200 A4	62.7	GR200 JAPAN	58.4
CU200 SWEDN	100.0	GR200 DAE	73.5	NE200 OECDE	62.5	CW200 A2	57.8
EG200 POL	100.0	GR200 USA	73.0	IT200 USSR	61.9	BN200 USA	57.4
EG200 GRMNY	100.0	NE200 AFME	71.3	BN200 USA	61.7	GR200 ENX	56.4
EG200 OST	100.0	GR200 ENX	71.1	CW200 A2	60.9	IT200 A8	56.4
PN200 SWISS	100.0	IT200 ROW12	71.1	IT200 ROECD	60.6	NE200 A1	54.4
CW200 A4	100.0	GR200 ROECD	70.2	GR200 ENX	60.6	IT200 EEC	53.9

GR200 A2	100.0	NE200 OECDE	67.4	NE200 A2	60.1	IT200 A4	53.4
GR200 USSR	100.0	IT200 ROECD	66.4	NE200 AFME	59.6	IT200 A2	52.4
GR200 INDIA	100.0	GR200 ROW12	65.8	GR200 USA	59.4	GR200 USA	52.4
GR200 EUR	100.0	NE200 USA	65.7	GR200 ROECD	59.0	GR200 ROECD	52.2
GR200 DAE	100.0	GR200 A8	63.0	IT200 JAPAN	58.0	IT200 USA	51.4
GR200 BRAZI	100.0	NE200 LATAM	61.5	NE200 A8	55.9	IT200 DAE	49.9
TS200 A2	100.0	NE200 A8	61.5	IT200 ROW12	55.8	IT200 JAPAN	49.7
IT200 USA	100.0	NE200 OECDP	60.2	GR200 ROW12	54.7	IT200 ROW12	48.2
NE200 OECDP	100.0	NE200 A2	59.8	NE200 A1	52.9	NE200 SEASI	47.7
NE200 A1	100.0	NE200 OECDN	59.2	GR200 A8	49.4	NE200 OECDN	47.6
NE200 A2	100.0	NE200 A1	59.1	NE200 SEASI	49.1	GR200 ROW12	46.6
NE200 A8	100.0	GR200 EUR	55.8	NE200 OECDN	48.3	NE200 AFSS	45.9
NE200 JAPAN	100.0	NE200 SEASI	55.7	GR200 EUR	43.2	IT200 INDIA	44.4
NE200 LATAM	100.0	IT200 INDIA	55.3	IT200 INDIA	36.6	GR200 A8	42.3
NE200 AFME	100.0	GR200 INDIA	50.5	NE200 AFSS	36.1	GR200 EUR	37.7
NE200 OECDE	100.0	GR200 A2	47.3	GR200 USSR	33.3	GR200 USSR	32.6
NE200 OECDN	100.0	GR200 USSR	43.0	GR200 INDIA	32.5	GR200 INDIA	22.1
NE200 SEASI	100.0	NE200 AFSS	40.6	GR200 A2	30.7	IT200 BRAZI	21.9
NE200 AFSS	100.0	IT200 BRAZI	39.6	IT200 BRAZI	11.7	GR200 A2	21.6

## IEW Poll Respondents, January 1996

<i>IEW Code</i>	<i>Organization/Project</i>	<i>Last Year</i>	<i>Country/ Region Coverage</i>
ACREF	Institute of General Energy Research, ASCR, "Conventional Wisdom" scenario, submitted to CHALLENGE, January 1993.	2020	Czech Republic
ADLMN	Center for Energy & Environmental Policy Research, MIT. M.A. Adelman, "The Genie Out of the Bottle: World Oil Since 1970", Cambridge, Massachusetts, MIT Press, 1995.	2010	8
AMOCH, AMOCL	Amoco Corporation, "World Oil and Energy Outlook", Low demand scenarios, May 1993.	2010	1, 2, 4, 8, FSU, Canada, USA, FSU
BGTUH, BGTUL	G. Moundjian, T. Balabanov, B. Bonev, Technical University, Sofia, High and Low scenarios, submitted to CHALLENGE, June 1993.	2020	Bulgaria
BNREF	Brookhaven National Laboratory, Reference scenario, US MARKAL-MAKRO runs, Photovoltaic Energy Impacts on U.S. CO2 emissions, June 1995.	2020	USA
CECO	Cambridge Econometrics "United Kingdom Energy and the Environment," July 1995.	2000	UK
CETA	CETA: A Model for Carbon Emissions Trajectory Assessment, Energy Vol. 13, No. 1(1992), pp55-77. Projection submitted June 1995.	2020	8
CHEE	Centre for Human Ecology, Edinburgh, UK. Slessor, King, Crane: "Non-Monetary Indicators of Sustainability, 1994	2020	UK
CNREF	High Growth, No Nuclear, Reference Case (with CO2 removal/storage options), ECN-PS, IEA-ETSAP/Annex IV, submitted to CHALLENGE, September 1993.	2020	Netherlands
CUREF	Chalmers University of Technology, no CO2 limits, submitted to CHALLENGE, April 1993.	2020	Sweden
CWREF	Global 2100, Reference case, "Harmonized Conventional Wisdom" CHALLENGE scenario, Alan Manne and Leo Schrattenholzer, April 1993.	2020	1, 2, 4, 8, USA, Other OECD, Rest-of-the-world
DRI	DRI/McGraw-Hill World Energy Forecast Report - December 1993	2010	8, Asia & Pacific, OECD Europe

EBREF	VITO and CES/KU Leuven, IEA-ETSAP/Annex IV, Reference Case (revised), submitted to CHALLENGE, September 1993.	2020	Belgium
ECCO	Resource Use Institute, Scotland GLOBECCO Program Guide, RWI, Edinburgh, Reference case, contributed to CHALLENGE, March 1993.	2020	Developed World, Developing World
	UK-ECCO model, M. Slessor, Edinburgh University, 1994.	2010	UK
ECSA	Environmentally Compatible Energy Strategies (ECS), IIASA, Scenarios A1, B, and C1, October 1995.	2020	2, 4, 8, Eastern Europe, Former Soviet Union, OECD Europe
ECSB			OECD N.America, OECD Pacific
ECSC	Global Energy Perspectives to 2050 and Beyond, IIASA and WEC.		
EFCH	Institute of Economic Forecasting, Russian Academy of Sciences, Gas-Coal High, Gas-Coal Low, and two Nuclear scenarios, submitted to CHALLENGE, May 1993.	2020	Russia
EFCL,			
EFNH,			
EFNL			
EGREF	University of Stuttgart, IER, Egbert Laege, CO2 Reduction Strategies for Germany, Base-Line Scenario, revised version, submitted to CHALLENGE, June 1993	2020	Germany
	University of Stuttgart, IER, Balandynowicz H. W., The Cost of CO2 Emissions Reduction: Case Studies for Poland and Austria, 1993.	2020	Austria, Poland
EIA	EIA/U.S. Department of Energy International Energy Outlook, 1994 and Annual Energy Outlook, 1994.	2010	1, 2, 4, 5, 8, Canada, Eastern Europe, France, Germany, Italy, Japan, Netherlands, OECD Europe, UK, USA, FSU,
EMRH,	Canada Department of Natural Resources, Ottawa; "Canada's Energy Outlook", No-regrets and Higher Oil Price scenarios, Sept. 1993.	2020	Canada
EMRL			
ENHI,	ENEA, Agency for New Technologies, Energy and Environment, Conventional Wisdom and Low Demand cases, MARKAL model revised case study, March 1993.	2020	Italy
ENLO			
EPREF	IER, University of Stuttgart, Energy Modeling for the Central and Eastern European Countries, Balandynowicz, H.W. et al., "CO2 Reduction Strategies for Poland," submitted to CHALLENGE, 1992.	2020	Poland



ESCAP	UNESCAP, Bangkok, Base Scenario State-of-the-Environment Report, October 1995.	2010	Asia & Pacific
EUBF, EUCW, EUFO, EUHM	European Commission DG XVII; "Battlefield", "Conventional Wisdom", "Forum", and "Hypermarket" Scenarios European Energy to 2020: A scenario approach Energy in Europe, special issue, forthcoming.	2020	8, European Community
EWBAU EWPOL	East-West Center, Business-as-usual and Presented at the IEW meeting, June 1994, Policy/Low Scenario.	2020	2
FBAR	Institute of Energy Economics, Bariloche Foundation, contributed to CHALLENGE, March 1993.	2010	Argentina
GRI	Gas Research Institute (GRI), Baseline Projection of U.S. Energy Supply and Demand to 2010, 1994 edition, December 1993.	2010	USA
GRREF	OECD GREEN model, Reference case, submitted to CHALLENGE, July 1993.	2020	2, 8, USA, Japan, EEC, Rest of OECD, Energy Exporting Countries, FSU India, Eastern Europe, Dynamic Asian Economies, Brazil, Rest of the World
IAEAH IAEAL	International Atomic Energy Agency, Vienna Energy, Electricity, and Nuclear Power Estimates, July 1995.	2010	8
IEA	IEA World Energy Outlook, 1994.	2010	2, 4, 8, Africa, Eastern Europe, Latin America, OECD Europe, OECD N.America, OECD Pacific, South Asia, FSU
IGIDR	Indira Gandhi Institute of Development Research (IGIDR) Simulation of Macroeconomic Scenarios (SIMA), January 1994.	2020	India
INETH INETL	Institute for Nuclear Energy Technology, Beijing; High and Low scenario	2020	2

ISPRE ISREF ISUNF	Yuri Sinyak, ECS, IIASA, Scenarios, "Preferable", Reference", and "Unfavorable", May 1995.	2020	Eastern Europe, FSU
ITREF	12RT, BAU (business-as-usual) case, Alan S. Manne, International Trade - the Impact of Unilateral Carbon Emission Limits, July 1993.	2020	2, 8, USA, Japan, EEC, Rest of OECD, Energy Exporting Countries, FSU, India, Eastern Europe, Dynamic Asian Economies, Brazil, Rest of the World
IWREF	Institut für Wärmetechnik, TU Graz, submitted to CHALLENGE, April 1993.	2020	Austria
KEEI	Korea Energy Economics Institute (KEEI), Long-Term Energy Forecast, November 1994	2020	Korea
KFAST	KFA-STE, Juelich Research Center Energy Use and Air Pollution in Indonesia, December 1994.	2020	Indonesia
KNREF	Kanazawa University, Business-as-usual Macroeconomic and Sectoral Impacts of Carbon Taxation, Noriyuki Goto, forthcoming in Energy Economics, December 1995.	2020	Japan
LBL	Lawrence Berkeley Laboratory, "Cost of Limiting Carbon Emissions - China Case Study", December 1993.	2020	2
LELOW, LENUC, LEREF	Lithuanian Energy Institute, Base case, submitted to CHALLENGE, February 1993.	2020	Lithuania
LYNCH	Center for International Studies, MIT, MOE Submitted to the IEW, January 1994.	2020	2, 4, 5, 6, 8, Canada, Eastern Europe, FSU, OECD Europe, Japan, USA
MACAS	Macedonian Academy of Sciences Pop-Jordanov, Presentation at the 16th WEC Congress, October 1995.	2020	Macedonia
MERGE	A.S. Manne and R.G. Richels, MERGE model, reference case MERGE; A.S. Manne and R.G. Richels, "The Greenhouse Debate: Economic Efficiency, Burden Sharing and Hedging Strategies", The Energy Journal, vol. 16, no. 4, pp. 1-37, 1995.	2020	2, 4, 8, FSU, USA

NEA	NEA, Nuclear Energy Agency	2010	1, 2, 4, 8
NEAHI	Nuclear energy data and other non-published documents,		
NEALO	May 1994.		
NEREF	New Earth 21 Model, Reference Scenario Yasumasa Fujii et al., "Global Energy System and CO2 Emissions Control Policies", June 1993 (revised March 1994).	2020	1, 2, 8, Japan, Latin America, Middle East and Northern Africa, Australia and New Zealand, OECD Europe, OECD N.America, South and East Asia, Sub-Saharan Africa
NSUWG	NEPA (China), SPC (China), UNDP, GEF China: Issues and Options in GHGs Emission Control, Summary Report, transcribed at IIASA by Wei Zhihong.	2020	2
ODELL	EURICES/PRO, Prof. Peter Odell, Global Energy Prospects, 1994.		8
OLADE	OLADE, "Energy Prospects", Phase II, Final Results, March, 1993.	2010	Latin America Caribbean
OWREF	OPEC World Energy Model (OWEM), Reference Case, submitted to the IEW Poll, Dezember 1995.	2020	4, 5, 6, 8, OECD Europe, OECD N.America, OECD Pacific
PLMCP	Polish Ministry for Central Planning Submitted by J.S. Michna, February 1993.	2020	Poland
PLMIT	Polish Ministry for Industry and Trade, Institute for Fundamental Technical Problems "Energy Policy and Draft Program for Poland up to 2010", July 1993.	2010	Poland
PNREF	Paul Scherrer Institute, Nuclear Available and	2020	Switzerland
PSREF	Nuclear Moratorium, MARKAL-MACRO runs for Switzerland. Swiss country study submitted to CHALLENGE, September 1995.		
PREM	Former Soviet Union, Reference (Base) Scenario, submitted Asia-Pacific Energy Outlook-Honolulu: PREM EWC, May 1995.	2010	FSU
SHEM	National Energy Administration, Sudan. Submitted to the IEW in June 1994.	2020	Sudan

SIOPT, SIREA	Siberian Energy Institute, Yuri Kononov, Optimistic and Realistic scenarios, October 1993.	2020	FSU
STPET	Ministry for Fuel and Energy, Russian State Energy Program, V.V. Bushuev, "New Energy Policy of Russia: Basic Concepts", Energetik no. 5, 1993.	2020	Russia
TEREF	Tata Energy Research Institute, TERI Energy Economy Evaluation and Simulation (TEESE) Model, Base case, June 1995.	2020	India
TSREF	INET/ITEESA, Tsinghua University, Beijing, Reference scenario, submitted to CHALLENGE, September 1993.	2020	2
VEREF	VEIKI, Hungary, Reference case (mixed coal and nuclear scenario), submitted to CHALLENGE, February 1993.	2020	Hungary
WECA, WECB, WECB1, WECC	World Energy Council, scenarios A, B, B1, C; September 1993.	2020	8, China (incl. other Asian Planned Ec.), Eastern Europe, Latin America, Middle East and N.Africa, FSU, OECD Europe, OECD N.America, Pacific Countries, South Asia, Subsaharan Africa
YOHEB	Gary Yohe, Wesleyan University, Base Case (50th percentile) 95th, and 5th percentile. Integrated Assessment Model, December 1995.	2020	8

## Responses Sorted by Region and Organization

The leftmost column identifies the region or individual nation. A1 . . . A8 indicate the standard IEW regions:

- A1. Former USSR and Eastern Europe
- A2. China
- A4. OECD
- A5. OPEC
- A6. NODC (Non-OPEC developing countries)
- A8. World, total

A3 and A7 are old identifiers that are no longer used.

Other regions and nations are abbreviated as follows:

AFME	Africa and Middle East
AFR	Africa
AFSS	Africa South of the Sahara
ANZ	Australia + New Zealand
ARG	Argentina
ASPAC	Asia and the Pacific
AUS	Australia
BELGM	Belgium
BRAZI	Brazil, old, revived 1/93
BULG	Bulgaria
CAN	Canada
CHREP	Czech Republic
DAE	Dynamic Asian Economies: 4 Tigers + Thailand + Phil.
DC	Developing Countries (A5+A6), i.e., excluding China
EEC	European Economic Community
EEUR	Eastern Europe
ENX	Energy Exporting Countries
EU15	European Community of the 15
FRANC	France
GRMNY	Germany (incl. East Germany)
HNGRY	Hungary
INDIA	India
INDON	Indonesia
INDUS	Industrialized countries, old
ITALY	Italy
JAPAN	Japan
KOREA	Korea
LATAM	Latin America
LDC	Developing Countries (A2+A5+A6), i.e., including China
LITHU	Lithuania
MACED	Macedonia
NAFME	North Africa and Middle East

NLAND	The Netherlands
OECD E	OECD Europe
OECD N	OECD North America (Canada, USA)
OECD P	OECD Pacific (Japan, Australia, New Zealand)
OOECD	Other OECD (OECD minus USA)
OST	Austria
PACW	Pacific countries, WEC aggregation (OCEANIA)
POL	Poland
ROECD	Other OECD, GREEN & 12RT version
ROW12	Rest of the world, GREEN & 12RT version
RUS	Russia
SASIA	South Asia
SEASI	South East Asia
SUDAN	Sudan
SWEDN	Sweden
SWISS	Switzerland
UK	United Kingdom
USA	USA
USSR	Former USSR

On the following pages, the second column indicates the organization and scenario; the third column indicates the last year for which projections are provided by the respondent; the next 19 columns indicate the presence or absence of a response for the last year to line items 1 (oil price), 2 (GNP index), ..., 19 (marginal cost of emission reductions). The rightmost column indicates the date of the report cited in the individual poll response.

A1	AMOCH	2010		2	3		5		8		11		14	15		17	18		1993			
A1	AMOCL	2010		2	3		5		8		11		14	15		17	18		1993			
A1	CWREF	2020	1	2	3		5	6	7	8		11		14	15	16	17	18	1993			
A1	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1995	
A1	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1995	
A1	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1995	
A1	EIA	2010	1	2	3		5	6		8		11		14	15				18		1995	
A1	NEAHI	2010															15				1994	
A1	NEALO	2010															15				1994	
A1	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
A2	AMOCH	2010		2	3		5		8		11		14	15		17	18					1993
A2	AMOCL	2010		2	3		5		8		11		14	15		17	18					1993
A2	CWREF	2020	1	2	3		5	6	7	8		11		14	15	16	17	18				1993
A2	EIA	2010	1	2	3		5		8		11		14	15					18			1995
A2	EWBAU	2020		2	3		5		8		11		14	15		17	18					1994
A2	EWPOL	2020		2	3		5		8		11		14	15		17	18					1994
A2	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13			16	17	18	19	1993
A2	IEA	2010	1	2	3		5		8		11		14	15	16	17						1994
A2	INETH	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1995
A2	INETL	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1995
A2	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
A2	LBL	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
A2	LYNCH	2020	1				5	6	7													1994
A2	MERGE	2020	1	2	3		5	6		8	9		11		14	15	16	17	18			1995
A2	NEAHI	2010															15					1994
A2	NEALO	2010															15					1994
A2	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
A2	NSUWG	2020		2	3		5		8		11							17	18			1994
A2	TSREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
A2	WECA	2020		2	3		5		8		11		14	15	16	17	18					1993
A2	WECB	2020		2	3		5		8		11		14	15	16	17	18					1993
A2	WECB1	2020		2	3		5		8		11		14	15	16	17	18					1993
A2	WECC	2020		2	3		5		8		11		14	15	16	17	18					1993
A4	AMOCH	2010		2	3		5		8		11		14	15		17	18					1993
A4	AMOCL	2010		2	3		5		8		11		14	15		17	18					1993
A4	CWREF	2020	1	2	3		5	6	7	8		11		14	15	16	17	18				1993
A4	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
A4	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
A4	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
A4	EIA	2010	1	2	3		5		8		11		14	15					18			1995
A4	IEA	2010	1	2	3		5	6	7	8		11		14	15	16	17					1994
A4	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
A4	LYNCH	2020	1				5	6	7													1994
A4	MERGE	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18		1995
A4	NEA	2010															15					1994
A4	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13				17	18		1995
A5	EIA	2010	1	2	3		5	6		8		11		14	15					18		1995
A5	LYNCH	2020	1				5	6	7													1994
A5	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13				17	18		1995
A6	LYNCH	2020	1				5	6	7													1994
A6	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13				17	18		1995

A8	ADLMN	2010	1																			1995			
A8	AMOCH	2010		2	3						8			11				14	15		17	18	1993		
A8	AMOCL	2010		2	3						8			11				14	15		17	18	1993		
A8	CETA	2020		2	3	4							11	12				14	15	16		18	19	1995	
A8	CWREF	2020	1	2	3													14	15	16	17	18		1993	
A8	DRI	2010	1		3								8	9		11	12							1993	
A8	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1995	
A8	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1995	
A8	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1995	
A8	EIA	2010	1	2	3											11			14	15		18		1995	
A8	EUBF	2020	1	2	3	4	5	6										14	15	16	17	18		1995	
A8	EUCW	2020	1	2	3	4	5	6										14	15	16	17	18		1995	
A8	EUFO	2020	1	2	3	4	5	6										14	15	16	17	18		1995	
A8	EUHM	2020	1	2	3	4	5	6										14	15	16	17	18		1995	
A8	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13						16	17	18	19	1993
A8	IAEAH	2010																	15						1995
A8	IAEAL	2010																	15						1995
A8	IEA	2010	1	2	3													14	15	16	17			1994	
A8	ITREF	2020	1	2	3													14	15	16	17	18	19	1993	
A8	LYNCH	2020	1																					1994	
A8	MERGE	2020	1	2	3													14	15	16	17	18		1995	
A8	NEAHI	2010																	15					1994	
A8	NEALO	2010																	15					1994	
A8	NEREF	2020	1	2	3													14	15	16	17	18	19	1994	
A8	ODELL	2020	1	2	3													14	15	16				1994	
A8	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13							17	18	1995	
A8	WECA	2020		2	3													14	15	16	17	18		1993	
A8	WECB	2020		2	3													14	15	16	17	18		1993	
A8	WECB1	2020		2	3													14	15	16	17	18		1993	
A8	WECC	2020		2	3													14	15	16	17	18		1993	
A8	YOHEB	2020		2																		18	19	1995	
A8	YOHEH	2020		2																		18	19	1995	
A8	YOHEL	2020		2																		18	19	1995	
AFME	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			1994	
AFR	IEA	2010	1	2	3													14	15	16	17			1994	
AFSS	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			1994	
AFSS	WECA	2020		2	3													14	15	16	17	18		1993	
AFSS	WECB	2020		2	3													14	15	16	17	18		1993	
AFSS	WECB1	2020		2	3													14	15	16	17	18		1993	
AFSS	WECC	2020		2	3													14	15	16	17	18		1993	
ANZ	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			1994	
ARG	FBAR	2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1993	
ASPAC	DRI	2010	1		3	4	5	6	7	8	9	10	11	12	13						17			1993	
ASPAC	ESCAP	2010			3																			1995	
AUS	ABARE	2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1995	
BELGM	EBREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			1993	
BRAZI	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13						16	17	18	19	1993
BRAZI	ITREF	2020	1	2	3														14	15	16	17	18	19	1993
BULG	BGTUH	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1993	
BULG	BGTUL	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1993	
CAN	AMOCH	2010		2	3													14	15		17	18		1993	
CAN	AMOCL	2010		2	3													14	15		17	18		1993	
CAN	EIA	2010	1	2	3													14	15		18			1995	
CAN	EMRH	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1993	
CAN	EMRL	2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				1993	
CAN	LYNCH	2020	1																					1994	



CHREP	ACREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	1993		
DAE	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19	1993	
DAE	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
DC	CWREF	2020	1	2	3		5	6	7	8			11			14	15	16	17	18		1993
EEC	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19	1993	
EEC	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
EEUR	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EEUR	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EEUR	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EEUR	EIA	2010	1	2	3		5			8			11			14	15		18			1995
EEUR	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19	1993	
EEUR	IEA	2010	1	2	3		5			8			11			14	15	16	17			1994
EEUR	ISPRE	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EEUR	ISREF	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EEUR	ISUNF	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EEUR	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
EEUR	LYNCH	2020	1				5	6	7							14	15	16	17	18	19	1993
EEUR	WECA	2020		2	3		5			8			11			14	15	16	17	18		1993
EEUR	WECB	2020		2	3		5			8			11			14	15	16	17	18		1993
EEUR	WECB1	2020		2	3		5			8			11			14	15	16	17	18		1993
EEUR	WECC	2020		2	3		5			8			11			14	15	16	17	18		1993
ENX	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19	1993	
ENX	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
EU15	EUBF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EU15	EUCW	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EU15	EUFO	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
EU15	EUHM	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
FRANC	EIA	2010	1	2	3		5			8			11			14	15		18			1995
GRMNY	EGREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
GRMNY	EIA	2010	1	2	3		5			8			11			14	15		18			1995
HNGRY	VEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		17	18		1993
INDIA	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19	1993	
INDIA	IGIDR	2020	1	2	3		5	6	7	8			11	12	13	14		17	18			1994
INDIA	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
INDIA	TEREF	2010	1	2	3	4	5	6	7	8	9	10	11	12	13		15		17	18		1995
INDON	KFAST	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1994
INDUS	ECCO	2020			3		5			8			11			14	15		17	18		1993
ITALY	EIA	2010	1	2	3		5			8			11			14	15		18			1995
ITALY	ENHI	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
ITALY	ENLO	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
JAPAN	EIA	2010	1	2	3		5			8			11			14	15		18			1995
JAPAN	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19	1993	
JAPAN	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
JAPAN	KNREF	2010	1	2	3		5			8			11			14	15	16	17	18		1995
JAPAN	LYNCH	2020	1				5	6	7							14	15	16	17	18		1994
JAPAN	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
KOREA	KEEI	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1994
LATAM	IEA	2010	1	2	3		5			8			11			14	15	16	17			1994
LATAM	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
LATAM	OLADE	2010	1	2	3	4	5	6	7	8	9		11	12	13	14	15	16	17	18		1993
LATAM	WECA	2020		2	3		5			8			11			14	15	16	17	18		1993

LATAM	WECB	2020		2	3		5		8		11		14	15	16	17	18		1993			
LATAM	WECB1	2020		2	3		5		8		11		14	15	16	17	18		1993			
LATAM	WECC	2020		2	3		5		8		11		14	15	16	17	18		1993			
LDC	ECCO	2020			3		5		8		11		14	15		17	18		1993			
LITHU	LELOW	2010	1	2	3		5	6	7	8	9	10	11	12	13	14	15	16	17	18	1993	
LITHU	LENUC	2010	1	2	3		5	6	7	8	9	10	11	12	13	14	15	16	17	18	1993	
LITHU	LEREF	2010	1	2	3		5	6	7	8	9	10	11	12	13	14	15	16	17	18	1993	
MACED	MACAS	2020			3	4	5	6	7	8	9	10	11	12	13	14		17	18		1995	
NAFME	WECA	2020		2	3		5		8		11		14	15	16	17	18				1993	
NAFME	WECB	2020		2	3		5		8		11		14	15	16	17	18				1993	
NAFME	WECB1	2020		2	3		5		8		11		14	15	16	17	18				1993	
NAFME	WECC	2020		2	3		5		8		11		14	15	16	17	18				1993	
NLAND	CNREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
NLAND	EIA	2010	1	2	3		5		8		11		14	15				18				1995
OECD	DRI	2010	1	2	3	4	5	6	7	8	9	10	11	12	13			17				1993
OECD	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECD	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECD	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECD	EIA	2010	1	2	3		5		8		11		14	15				18				1995
OECD	IEA	2010	1	2	3		5		8		11		14	15	16	17						1994
OECD	LYNCH	2020	1				5	6	7													1994
OECD	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
OECD	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13			17	18			1995
OECD	WECA	2020		2	3		5		8		11		14	15	16	17	18					1993
OECD	WECB	2020		2	3		5		8		11		14	15	16	17	18					1993
OECD	WECB1	2020		2	3		5		8		11		14	15	16	17	18					1993
OECD	WECC	2020		2	3		5		8		11		14	15	16	17	18					1993
OECDN	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECDN	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECDN	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECDN	IEA	2010	1	2	3		5		8		11		14	15	16	17						1994
OECDN	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
OECDN	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13			17	18			1995
OECDN	WECA	2020		2	3		5		8		11		14	15	16	17	18					1993
OECDN	WECB	2020		2	3		5		8		11		14	15	16	17	18					1993
OECDN	WECB1	2020		2	3		5		8		11		14	15	16	17	18					1993
OECDN	WECC	2020		2	3		5		8		11		14	15	16	17	18					1993
OECDP	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECDP	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECDP	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OECDP	IEA	2010	1	2	3		5		8		11		14	15	16	17						1994
OECDP	OWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13			17	18			1995
OECD	CWREF	2020	1	2	3		5	6	7	8		11		14	15	16	17	18				1993
OST	EGREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
OST	IWREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
PACW	WECA	2020		2	3		5		8		11		14	15	16	17	18					1993
PACW	WECB	2020		2	3		5		8		11		14	15	16	17	18					1993
PACW	WECB1	2020		2	3		5		8		11		14	15	16	17	18					1993
PACW	WECC	2020		2	3		5		8		11		14	15	16	17	18					1993
POL	EGREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1993
POL	PLMCP	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		17	18		1993
POL	PLMIT	2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1993
ROECD	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19		1993
ROECD	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993

ROW12	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1993
ROW12	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
RUS	EFCH	2020			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			1993
RUS	EFCL	2020			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			1993
RUS	EFNH	2020			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			1993
RUS	EFNL	2020			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			1993
RUS	STPET	2020		2	3	4	5	6	7	8	9	10	11	12		14	15		17	18		1993
SASIA	IEA	2010	1	2	3		5			8			11			14	15	16	17			1994
SASIA	WECA	2020		2	3		5			8			11			14	15	16	17	18		1993
SASIA	WECEB	2020		2	3		5			8			11			14	15	16	17	18		1993
SASIA	WECEB1	2020		2	3		5			8			11			14	15	16	17	18		1993
SASIA	WECC	2020		2	3		5			8			11			14	15	16	17	18		1993
SEASI	NEREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1994
SUDAN	SHEM	2020		2	3	4	5	6	7							14		16	17			1994
SWEDN	CUREF	2020	1	2	3		5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
SWISS	PNREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
SWISS	PSREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
UK	CECO	2000	1	2	3		5	6	7	8	9	10	11	12	13	14	15		17	18		1995
UK	CHEE	2020			3																	1994
UK	ECCO	2010		2	3	4	5	6	7	8	9	10	11	12	13	14	15		17	18		1994
UK	EIA	2010	1	2	3		5			8			11			14	15			18		1995
USA	AMOC	2010		2	3		5			8			11			14	15		17	18		1993
USA	AMOCL	2010		2	3		5			8			11			14	15		17	18		1993
USA	BNREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	1995
USA	CWREF	2020	1	2	3		5	6	7	8			11			14	15	16	17	18		1993
USA	EIA	2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		17	18		1995
USA	GRI	2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1993
USA	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19		1993
USA	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
USA	LYNCH	2020	1				5	6	7													1994
USA	MERGE	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18		1995
USSR	AMOC	2010		2	3		5			8			11			14	15		17	18		1993
USSR	AMOCL	2010		2	3		5			8			11			14	15		17	18		1993
USSR	ECSA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
USSR	ECSB	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
USSR	ECSC	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
USSR	EIA	2010	1	2	3		5			8			11			14	15			18		1995
USSR	GRREF	2020	1	2	3	4	5	6	7	8	9	10	11	12	13		16	17	18	19		1993
USSR	IEA	2010	1	2	3		5			8			11			14	15	16	17			1994
USSR	ISPREF	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
USSR	ISREF	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
USSR	ISUNF	2020		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1995
USSR	ITREF	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18	19	1993
USSR	LYNCH	2020	1				5	6	7													1994
USSR	MERGE	2020	1	2	3		5	6	7	8	9	10	11			14	15	16	17	18		1995
USSR	PREM	2010					5	6	7	8	9	10	11	12	13							1995
USSR	SIOPT	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1993
USSR	SIREA	2020	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		1993
USSR	WECA	2020		2	3		5			8			11			14	15	16	17	18		1993
USSR	WECEB	2020		2	3		5			8			11			14	15	16	17	18		1993
USSR	WECEB1	2020		2	3		5			8			11			14	15	16	17	18		1993
USSR	WECC	2020		2	3		5			8			11			14	15	16	17	18		1993



INTERNATIONAL ENERGY WORKSHOP  
Part II: Frequency Distributions

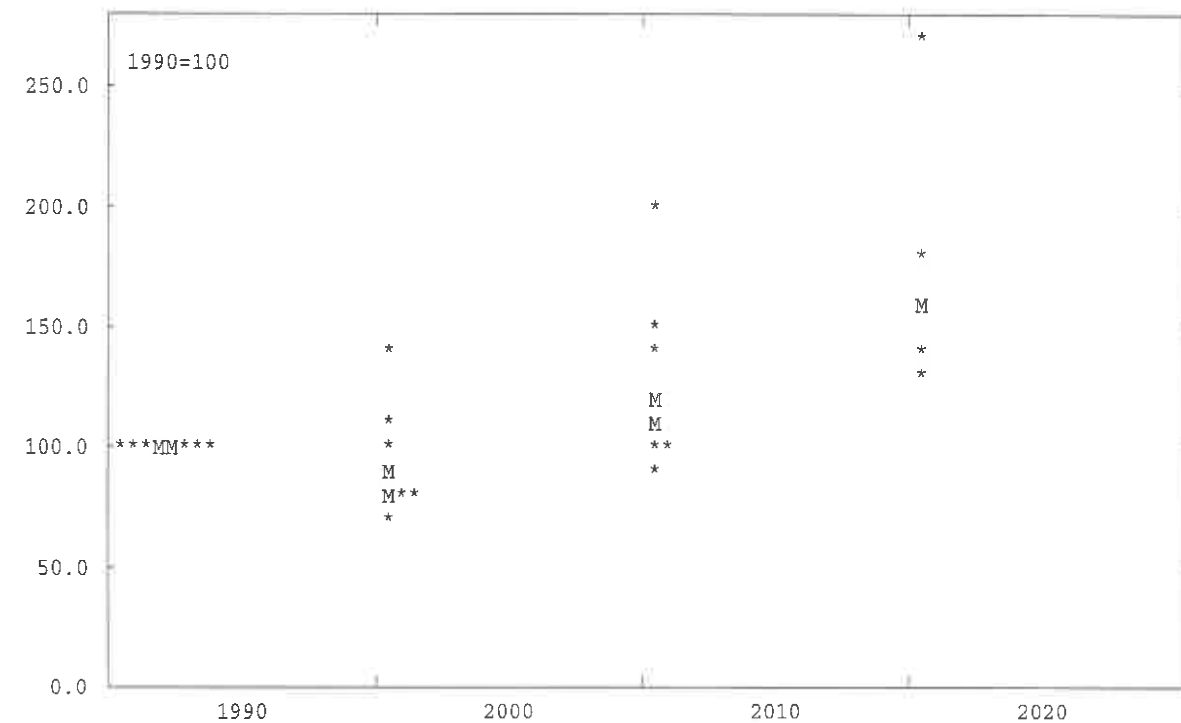
by  
Alan S. Manne  
Leo Schrattenholzer

January 1996

The following organizations have provided support for the work done on this report at the International Institute for Applied Systems Analysis and at Stanford University: Amoco Foundation, Center for Economic Policy Research (Stanford University), Electric Power Research Institute, and Pennsylvania Power & Light Company. The individual authors are solely responsible for the analysis presented here.

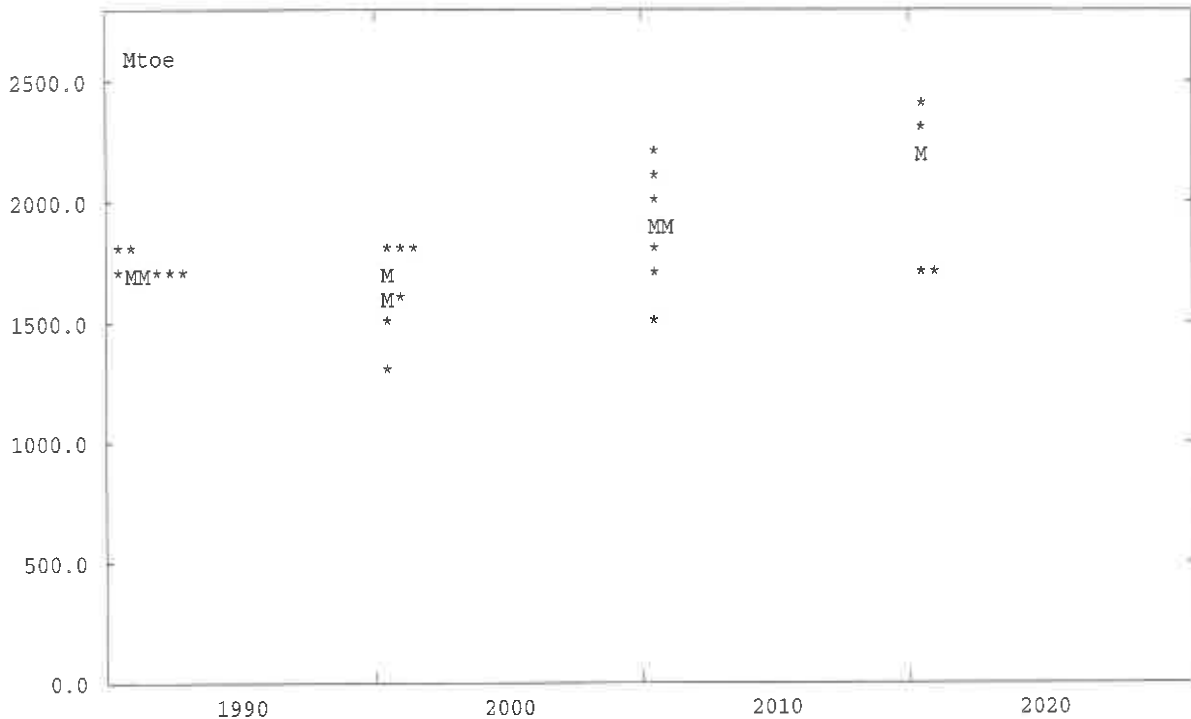


Real GNP (or GDP), Eastern Europe and Former Soviet Union



Medians:	1990	2000	2010	2020
AMOCB '93	100.0	143.0	196.7	273.1
AMOCCL '93	100.0	108.0	150.0	176.0
ECSCB '95	100.0	101.0	140.0	159.4
ECSC '95	100.0	89.0	118.0	140.0
EIA '95	100.0	79.3	114.0	125.7
CWREF '93	100.0	78.1	102.8	
ECSCA '95	100.0	76.0	101.0	
NEREF '94	100.0	73.1	90.9	

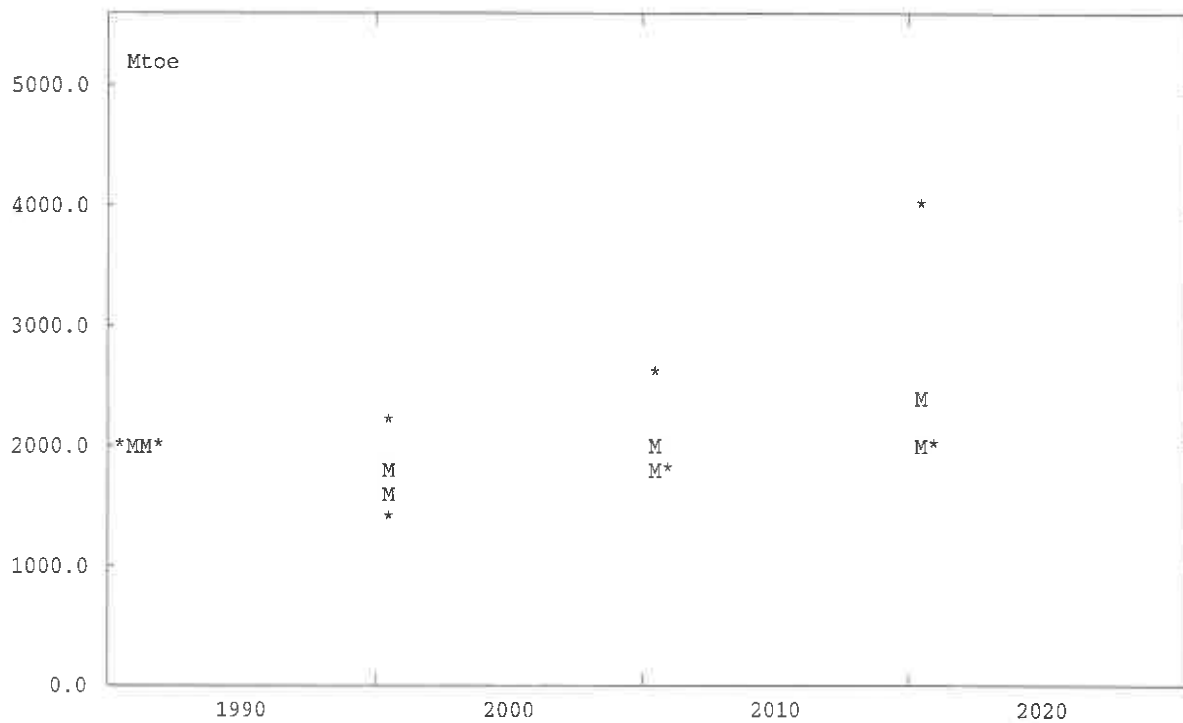
Total PE Consumption, Eastern Europe and Former Soviet Union



Medians:	1990	2000	2010	2020
CWREF '93	1838.0	1822.3	2160.0	2375.8
NEREF '94	1800.8	1781.0	2082.5	2282.4
EIA '95	1747.0	1754.0	1980.0	2206.0
ECSC '95	1738.8	1684.6	1904.0	1684.9
ECSA '95	1738.8	1601.1	1858.0	1661.8
ECSB '95	1738.8	1562.0	1756.0	
AMOCL '93	1720.0	1498.0	1661.3	
AMOCH '93	1720.0	1334.7	1474.1	

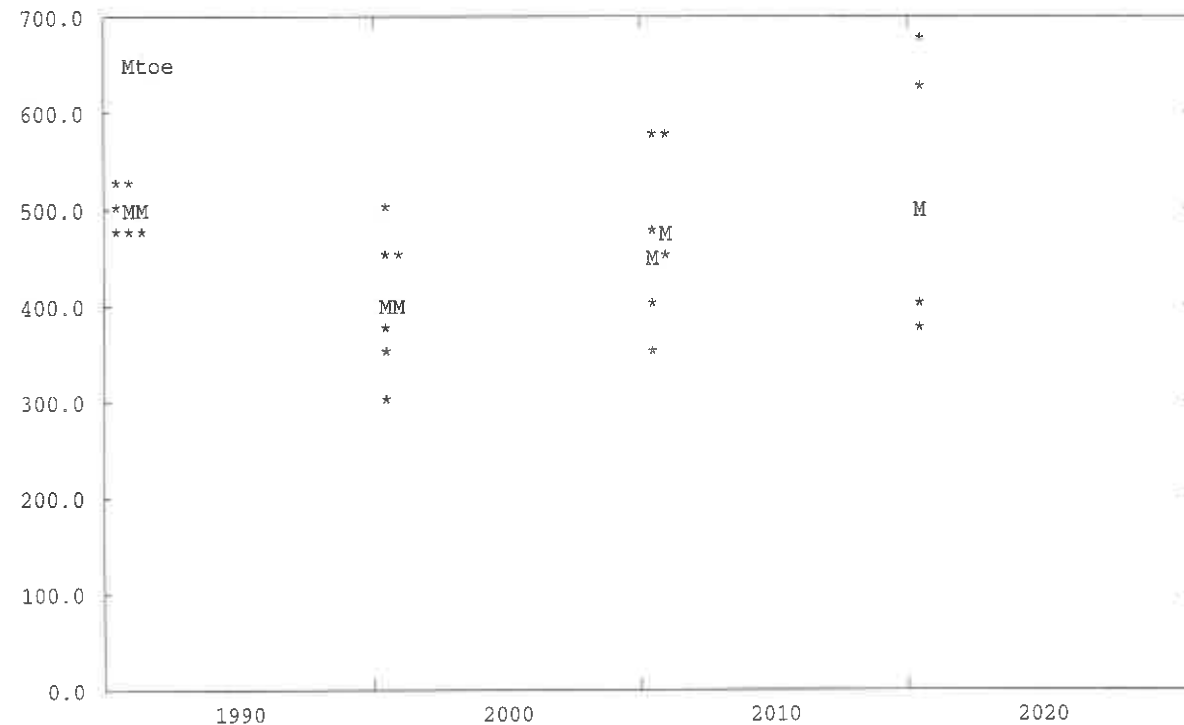


Total PE Production, Eastern Europe and Former Soviet Union



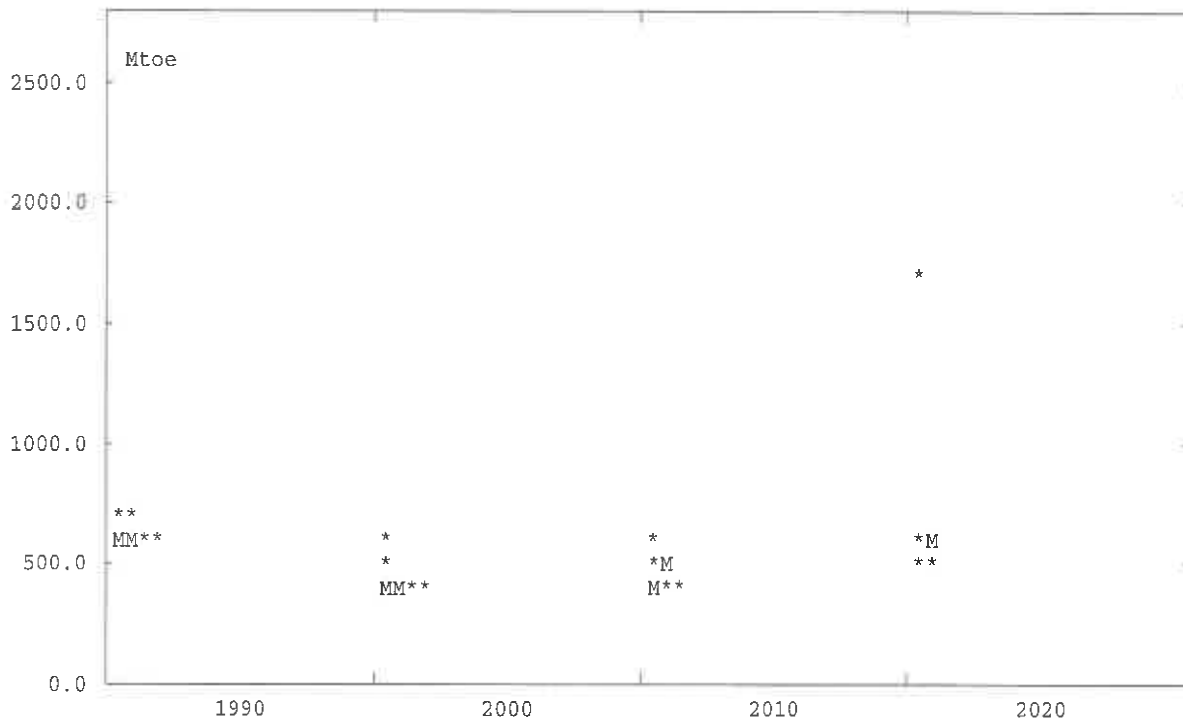
Medians:	1910.2		1733.2		1937.8		2260.1
NEREF '94	1966.0	NEREF '94	2153.3	NEREF '94	2546.4	NEREF '94	3988.3
ECSC '95	1910.2	ECSA '95	1769.0	ECSC '95	2029.6	ECSA '95	2432.0
ECSC '95	1910.2	ECSC '95	1697.4	ECSC '95	1846.1	ECSC '95	2088.3
ECSC '95	1910.2	ECSC '95	1480.0	ECSC '95	1725.0	ECSC '95	2043.7

Oil Consumption, Eastern Europe and Former Soviet Union



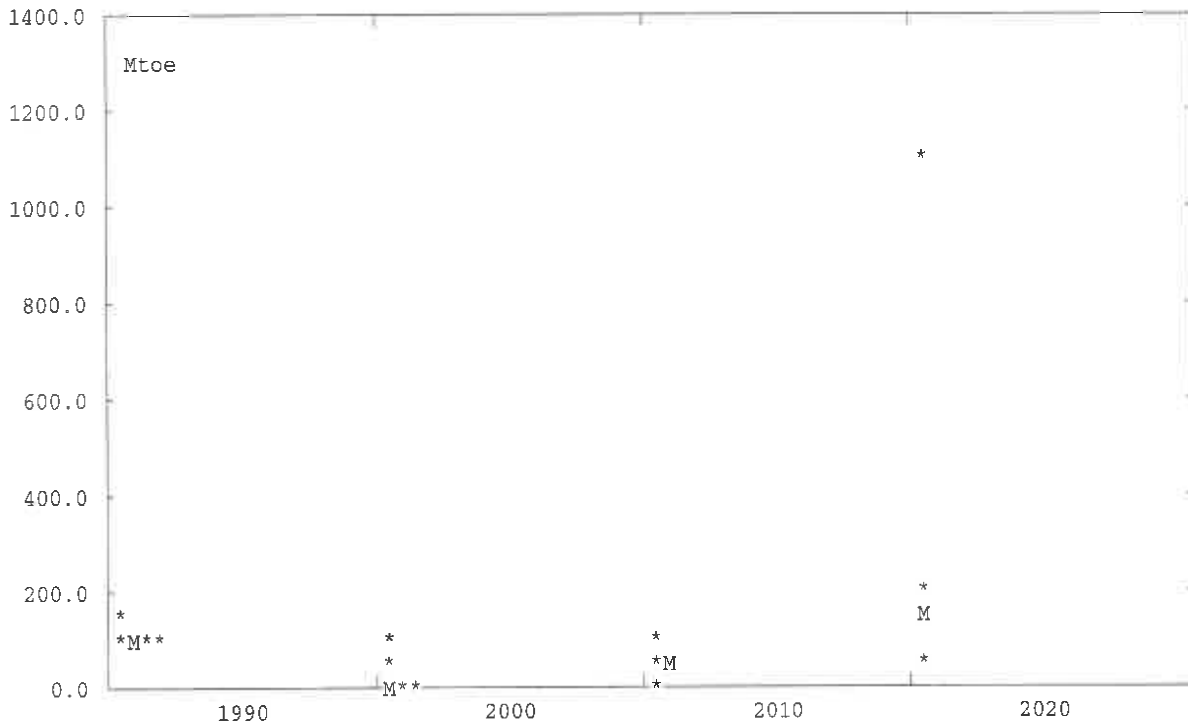
Medians:	1990	2000	2010	2020
NEREF'94	532.5	507.8	580.4	663.1
CWREF'93	530.0	461.0	565.0	627.5
EIA '95	494.0	440.0	475.0	496.0
AMOC'93	488.0	404.8	469.0	400.1
AMOCL'93	488.0	393.1	461.0	380.9
ECSC '95	487.2	385.0	451.0	
ECSA '95	487.2	348.0	408.0	
ECSE '95	487.2	301.0	351.3	

Oil Production, Eastern Europe and Former Soviet Union



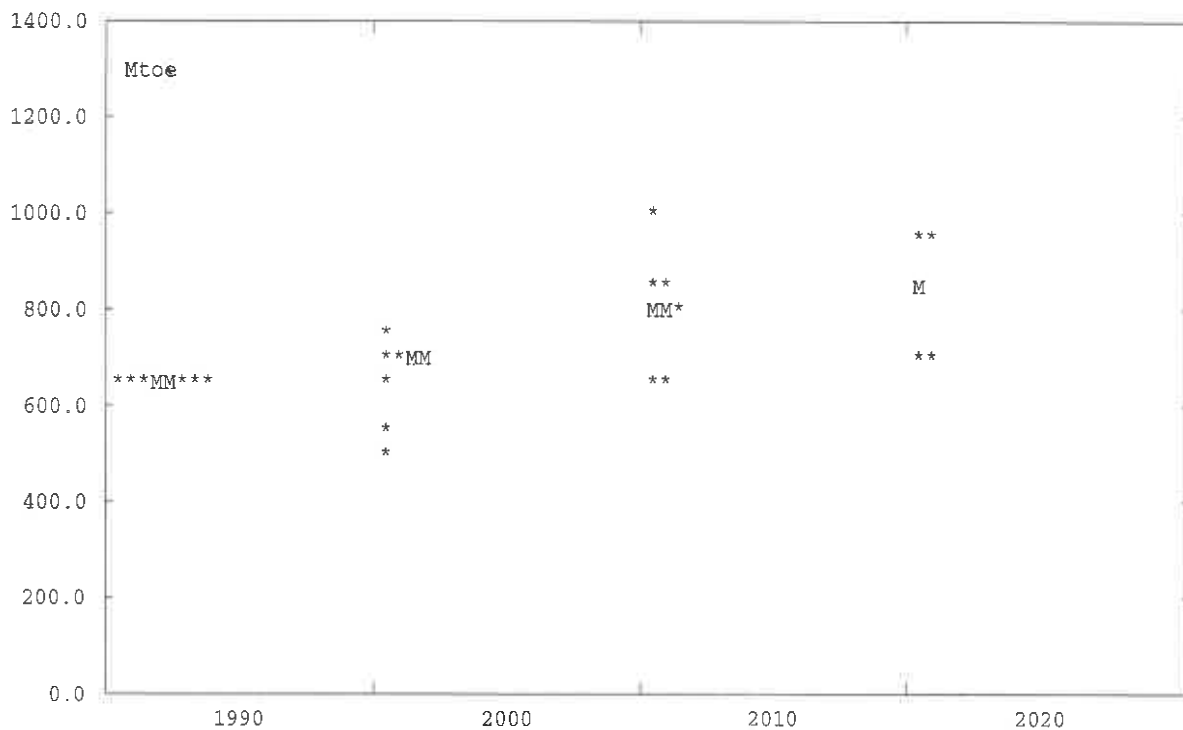
Medians:	1990	2000	2010	2020
EIA '95	697.0	555.0	580.4	1741.1
CWREF '93	655.0	507.8	548.0	581.1
NEREF '94	628.2	428.0	531.0	580.2
ECSC '95	587.1	387.1	434.9	543.0
ECSA '95	587.1	387.1	434.5	537.2
ECSC '95	587.1	387.1	434.2	537.2

Oil Exports - Imports, Eastern Europe and Former Soviet Union



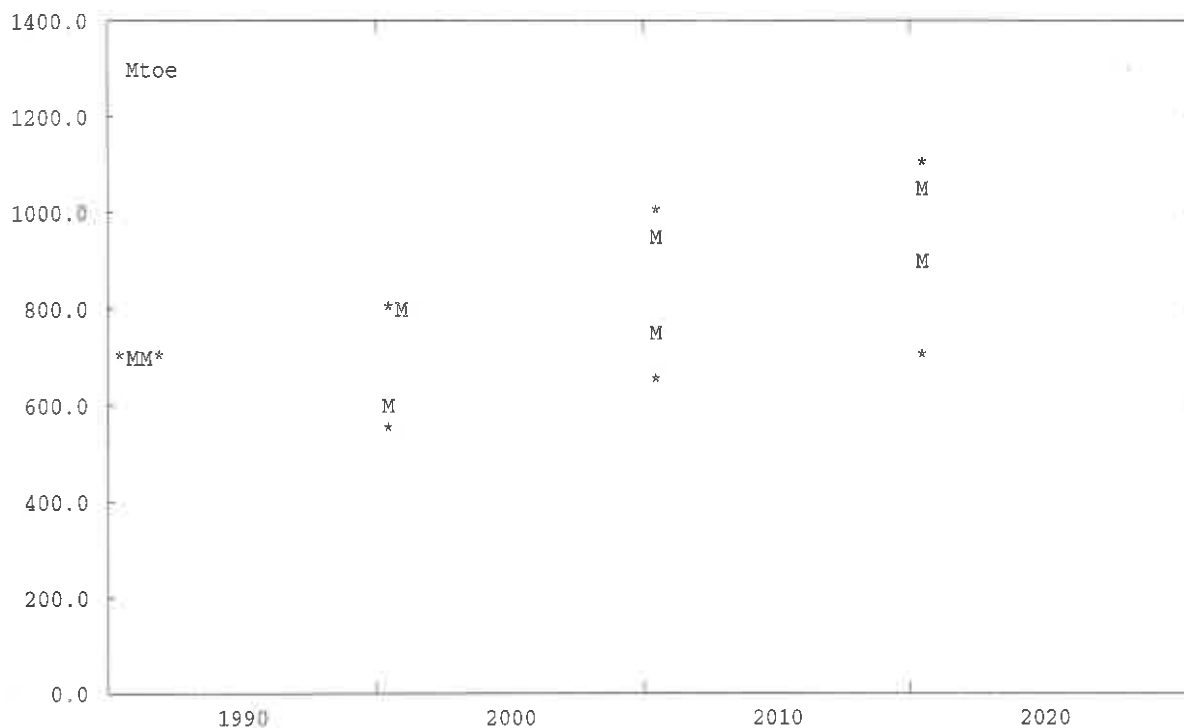
Medians:	1990	2000	2010	2020
CWREF'93	125.0	94.0	83.6	1078.3
NEREF'94	95.7	39.1	70.0	200.1
ECSC '95	94.6	0.0	26.2	137.1
ECSA '95	94.6	-6.1	0.0	47.0
ECSB '95	94.6	-17.7	-34.5	-47.3

Natural Gas Consumption, Eastern Europe and Former Soviet Union



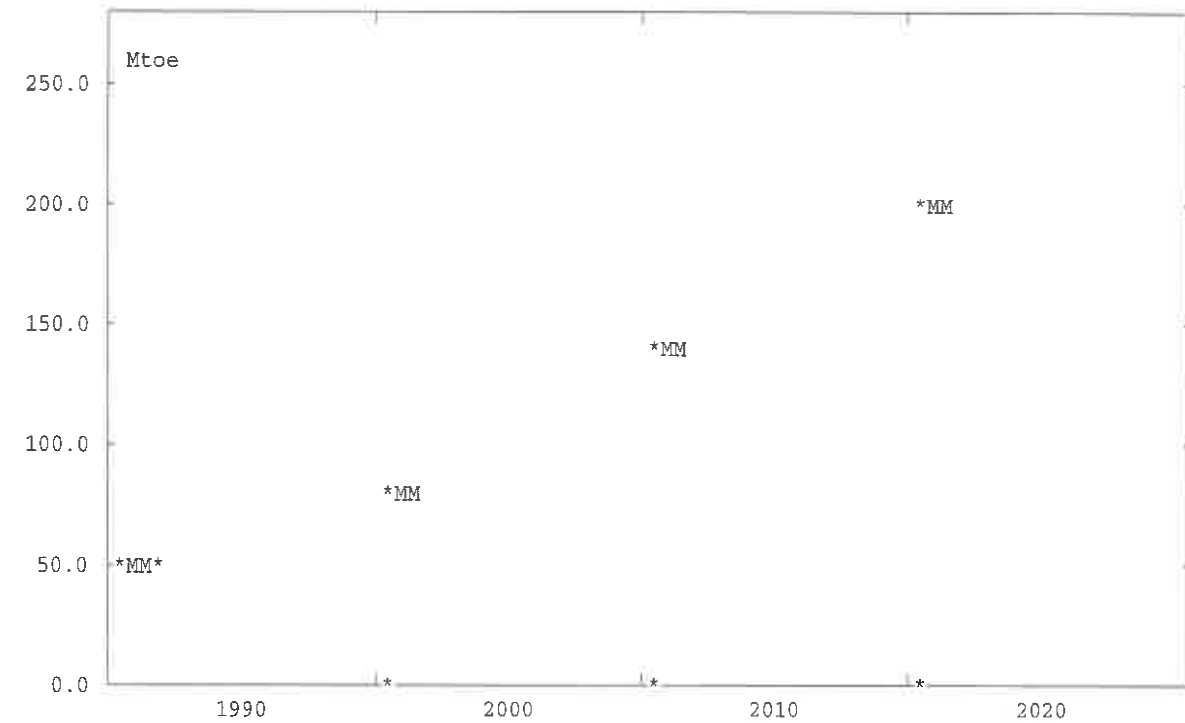
Medians:	1990	2000	2010	2020
CWREF '93	644.0	761.0	1015.0	955.0
AMOCH '93	639.0	721.2	850.0	927.4
AMOCL '93	639.0	711.7	840.6	865.3
ECSB '95	638.5	705.0	814.9	701.0
ECSA '95	638.5	684.0	788.0	697.9
ECSC '95	638.5	639.0	783.0	
NEREF '94	629.4	557.6	630.7	
EIA '95	628.0	523.2	627.9	

Natural Gas Production, Eastern Europe and Former Soviet Union



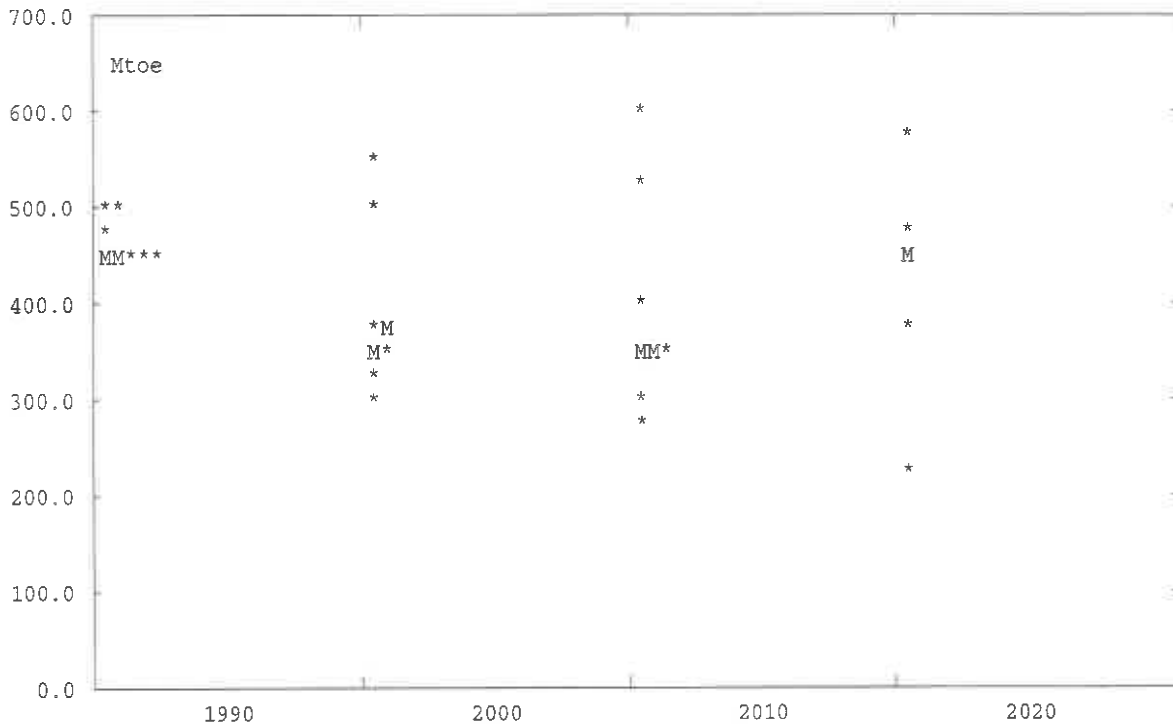
Medians:	690.7		701.3		862.1		977.1
ECSCB '95	690.7	ECSCA '95	805.3	ECSCA '95	981.8	ECSCA '95	1123.2
ECSC '95	690.7	ECSC '95	795.7	ECSC '95	952.8	ECSC '95	1061.2
ECSCA '95	690.7	ECSCB '95	606.8	ECSCB '95	771.4	ECSCB '95	893.1
NEREF'94	681.5	NEREF'94	557.6	NEREF'94	627.9	NEREF'94	701.0

Natural Gas Exports - Imports, Eastern Europe and Former Soviet Union



Medians:	1990	2000	2010	2020
ECSB '95	52.2	84.2	141.2	195.8
ECSC '95	52.2	84.1	140.7	195.8
ECSA '95	52.2	83.6	137.8	195.2
NEREF '94	52.1	0.0	0.0	0.0

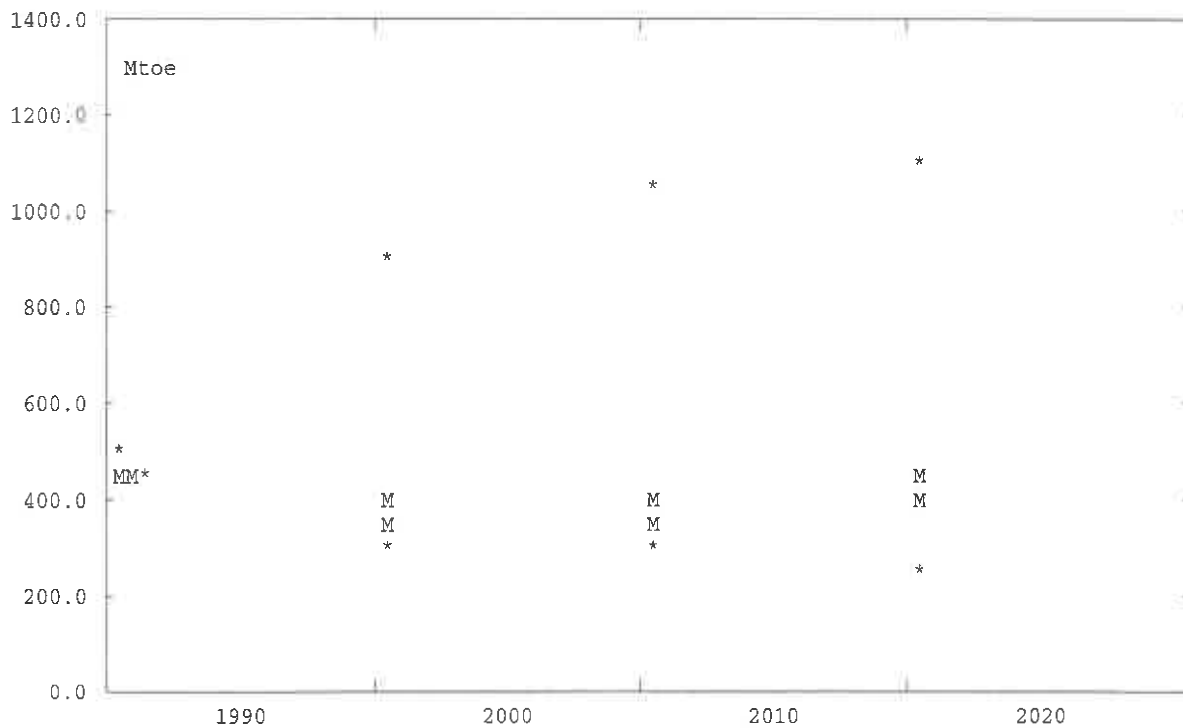
Coal Consumption, Eastern Europe and Former Soviet Union



Medians:	1990	2000	2010	2020
NEREF'94	499.0	558.0	596.9	586.3
CWREF'93	499.0	496.0	518.0	471.4
EIA '95	487.0	381.9	393.3	460.0
AMOCH'93	445.0	370.0	360.0	371.1
AMOCL'93	445.0	362.0	353.0	231.8
ECSC '95	444.7	360.0	345.0	
ECSA '95	444.7	326.5	307.5	
ECSB '95	444.7	300.2	276.8	

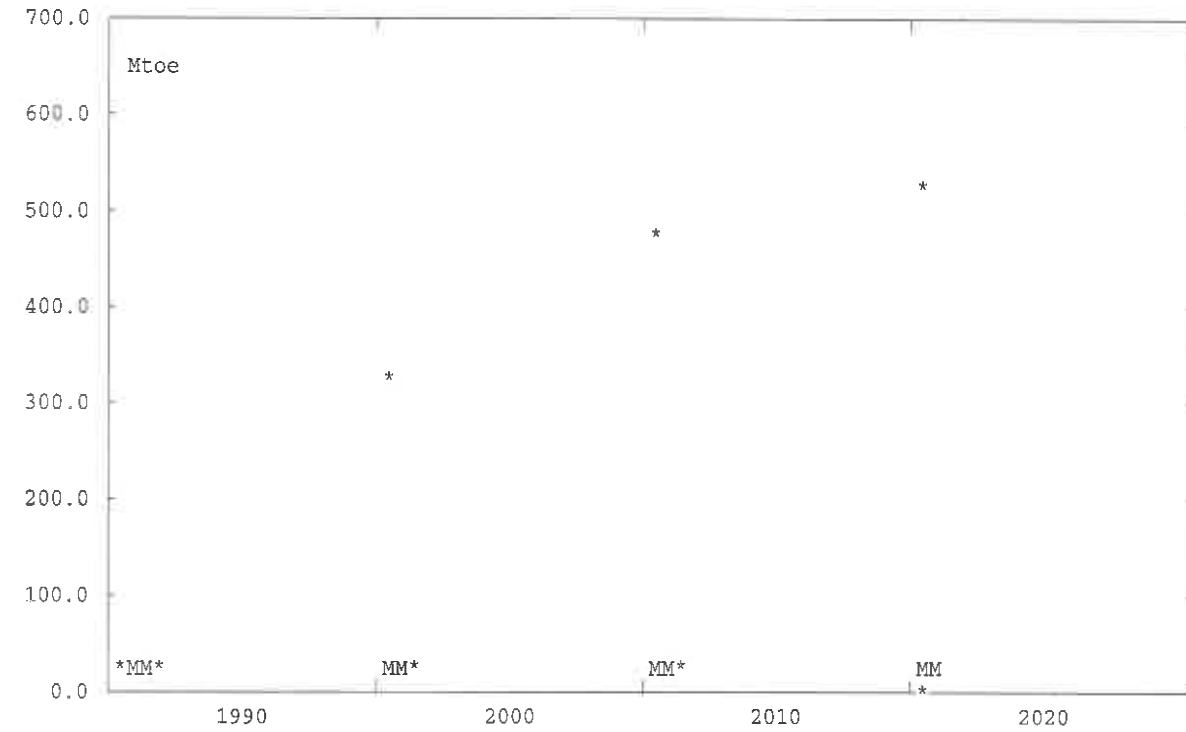


Coal Production, Eastern Europe and Former Soviet Union



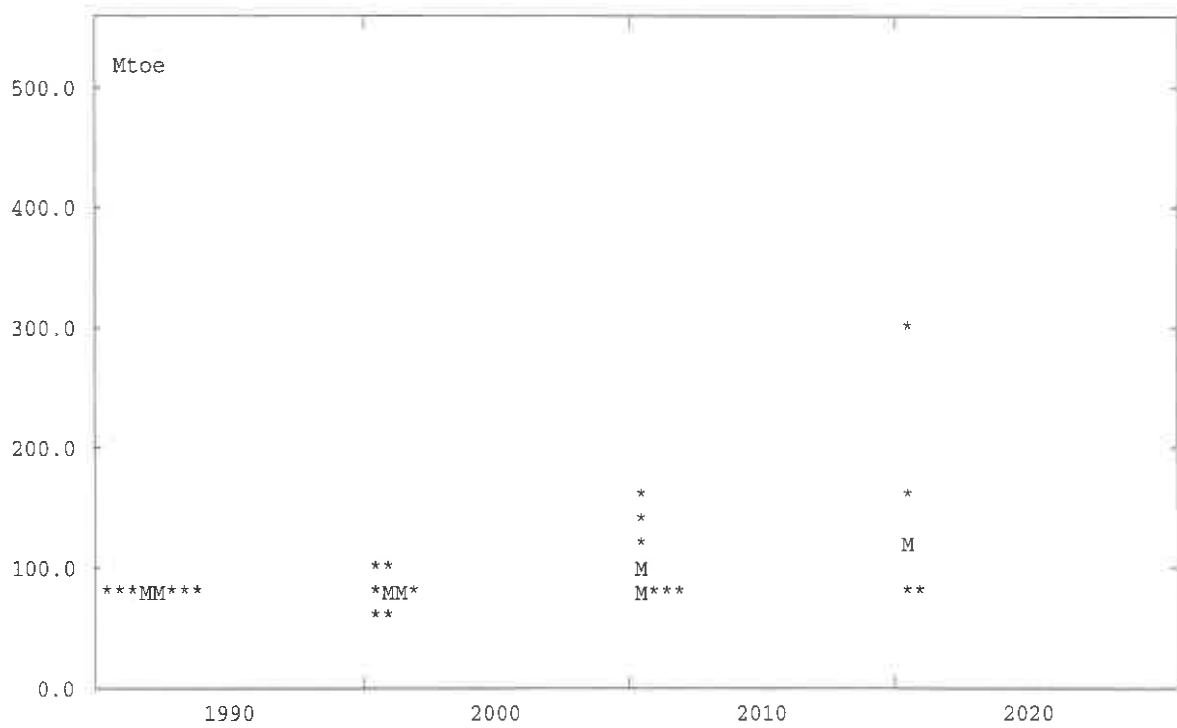
Medians:	462.8	371.4	372.0	436.2
NEREF '94	516.4	889.0	1060.8	1120.8
ECSC '95	462.8	398.9	411.0	471.3
ECSA '95	462.8	343.9	332.9	401.1
ECSB '95	462.8	321.7	296.4	256.5

Coal Exports - Imports, Eastern Europe and Former Soviet Union



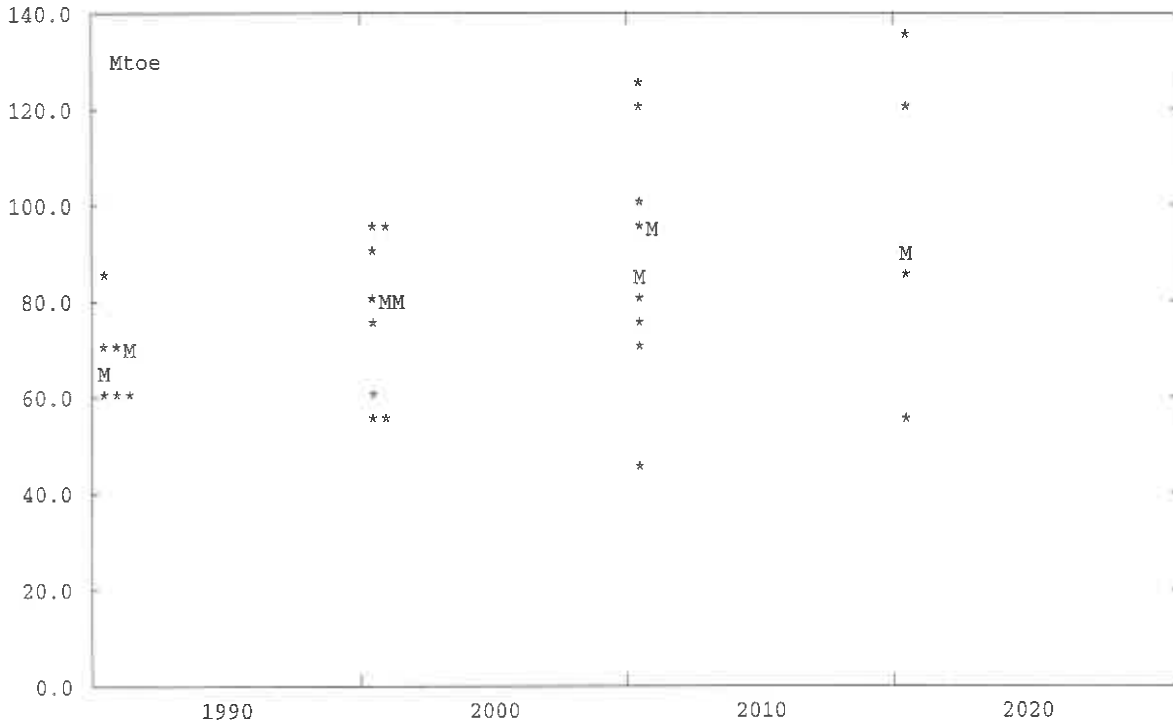
Medians:	18.2	19.4	22.5	27.4
ECSE '95	18.2	331.0	463.9	534.5
ECSC '95	18.2	21.5	25.4	30.0
ECSA '95	18.2	17.4	19.5	24.8
NEREF '94	17.4	17.0	17.7	-0.1

Renewables, Electric, Eastern Europe and Former Soviet Union



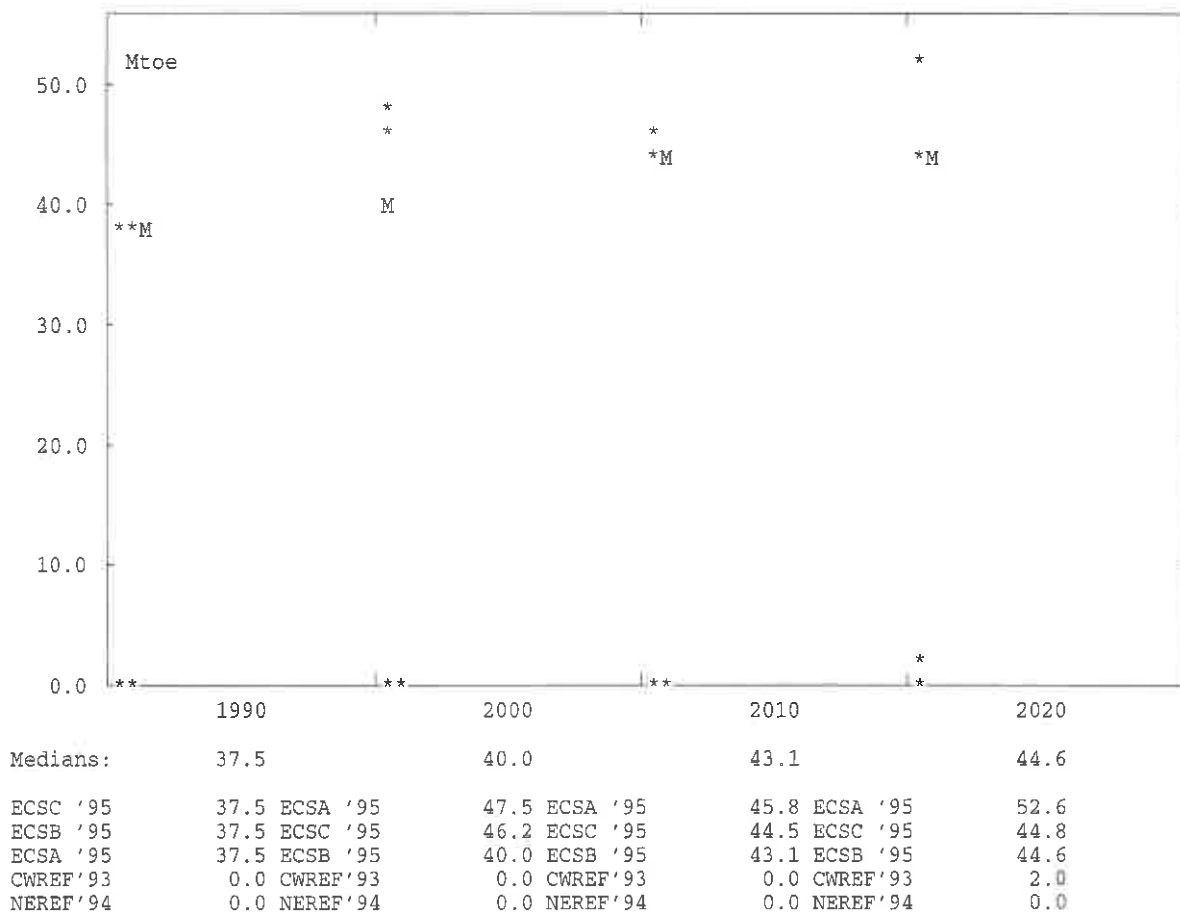
	1990	2000	2010	2020
Medians:	72.4	80.0	91.0	113.0
AMOCN'93	78.0 NEREF'94	106.0 NEREF'94	155.4 NEREF'94	304.7
AMOCN'93	78.0 CWREF'93	104.0 CWREF'93	130.0 CWREF'93	156.0
CWREF'93	78.0 AMOCN'93	87.0 AMOCN'93	120.0 ECSC '95	113.0
NEREF'94	73.5 AMOCN'93	87.0 AMOCN'93	93.0 ECSC '95	89.2
ECSC '95	71.4 EIA '95	73.0 EIA '95	89.0 ECSC '95	83.3
ECSC '95	71.4 ECSC '95	70.2 ECSC '95	81.1	
ECSC '95	71.4 ECSC '95	69.4 ECSC '95	72.9	
EIA '95	71.0 ECSC '95	69.2 ECSC '95	72.7	

Nuclear Energy, Eastern Europe and Former Soviet Union

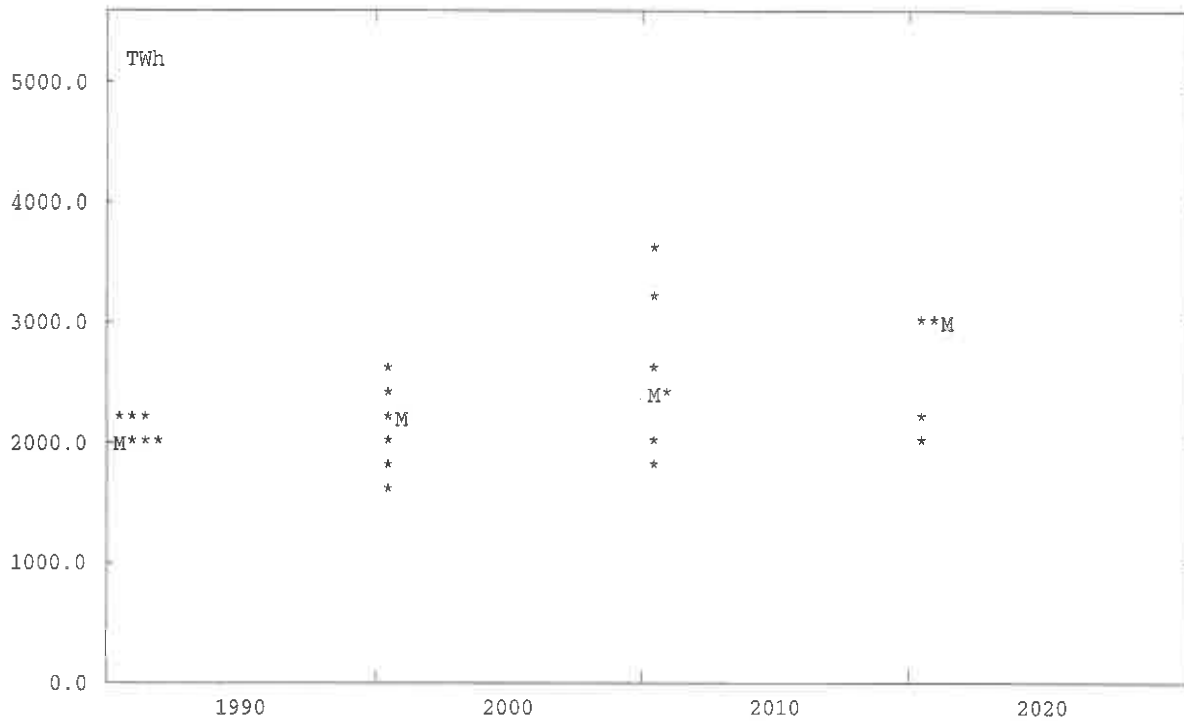


Medians:	1990	2000	2010	2020
CWREF '93	87.0	96.0	127.0	135.0
EIA '95	71.0	93.0	120.8	120.8
AMOC '93	70.0	88.4	100.0	90.4
AMOC '93	70.0	81.0	95.0	83.9
NEREF '94	66.4	80.0	92.5	53.8
ECSC '95	60.2	80.0	83.0	
ECSA '95	60.2	76.8	78.0	
ECSB '95	60.2	59.0	74.2	
		54.2	68.8	
		54.2	44.2	

Renewables, Nonelectric, Eastern Europe and Former Soviet Union

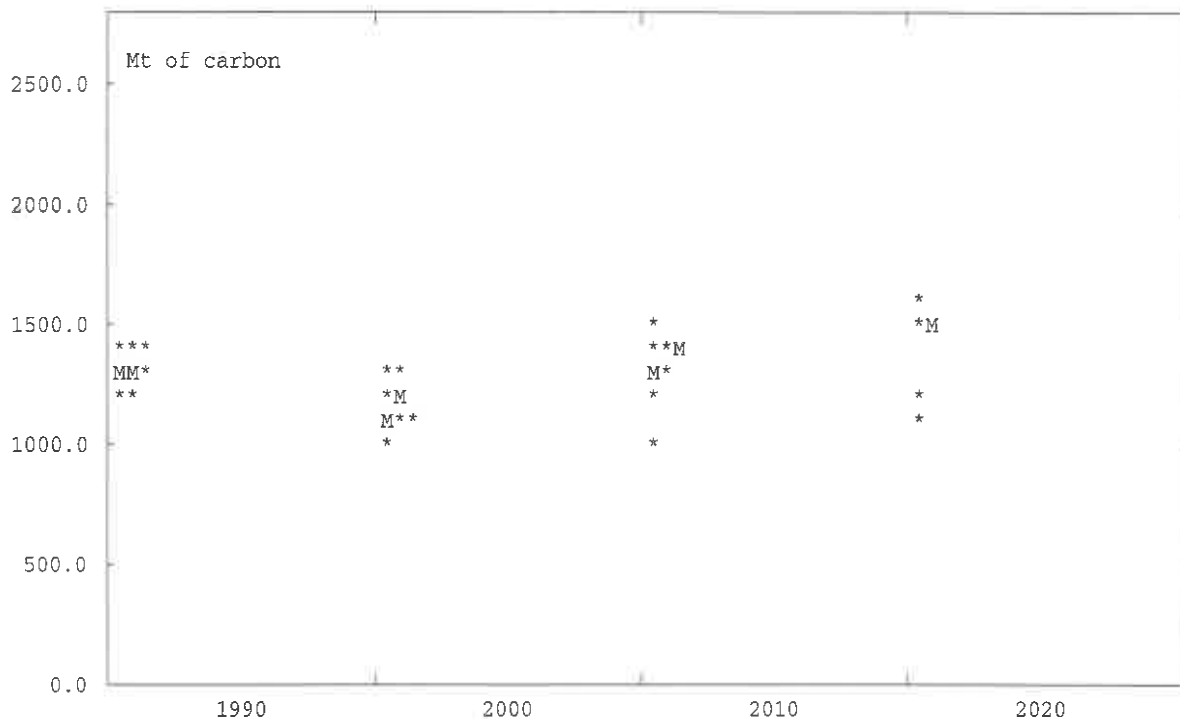


Electricity Generation, Eastern Europe and Former Soviet Union



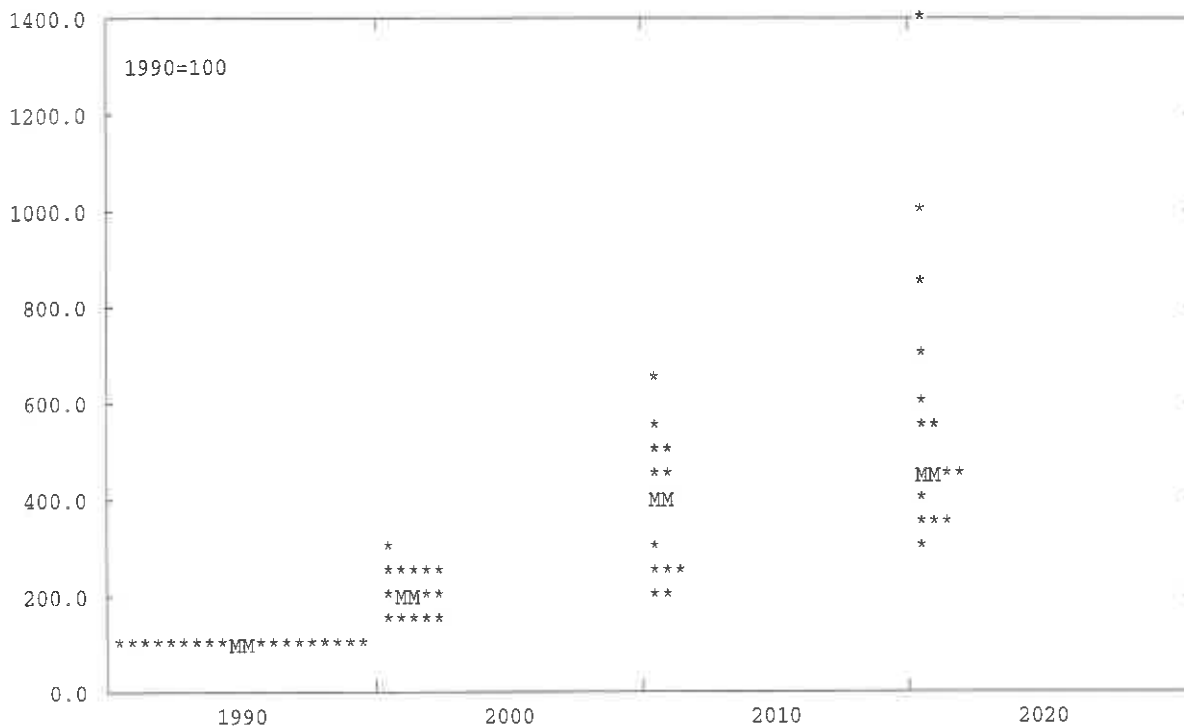
Medians:	1990	2000	2010	2020
NEREF'94	2203.3	2599.0	3506.0	3099.0
AMOCH'93	2169.0	2432.0	3201.0	3020.0
AMOCL'93	2169.0	2204.2	2667.5	2928.7
ECSC '95	2073.6	2108.4	2371.3	2162.3
ECSB '95	2073.6	1981.2	2320.0	2097.3
ECSA '95	2073.6	1879.0	2039.7	
CWREF'93	2024.0	1693.1	1861.7	

Carbon Emissions, Eastern Europe and Former Soviet Union



Medians:	1990	2000	2010	2020
ECSA '95	1378.0	1279.9	1455.0	1608.9
ECSC '95	1377.9	1273.0	1417.0	1514.7
ECSB '95	1377.9	1219.3	1383.0	1452.0
EIA '95	1343.0	1207.0	1363.5	1179.3
CWREF '93	1338.0	1143.9	1265.0	1124.1
NEREF '94	1282.1	1119.0	1258.0	
AMOCL '93	1246.0	1077.0	1167.1	
AMOCH '93	1246.0	958.6	1040.7	
NEREF '94		1279.9	1455.0	1608.9
CWREF '93		1273.0	1417.0	1514.7
ECSA '95		1219.3	1383.0	1452.0
AMOCH '93		1207.0	1363.5	1179.3
ECSC '95		1143.9	1265.0	1124.1
AMOCL '93		1119.0	1258.0	
EIA '95		1077.0	1167.1	
ECSC '95		958.6	1040.7	

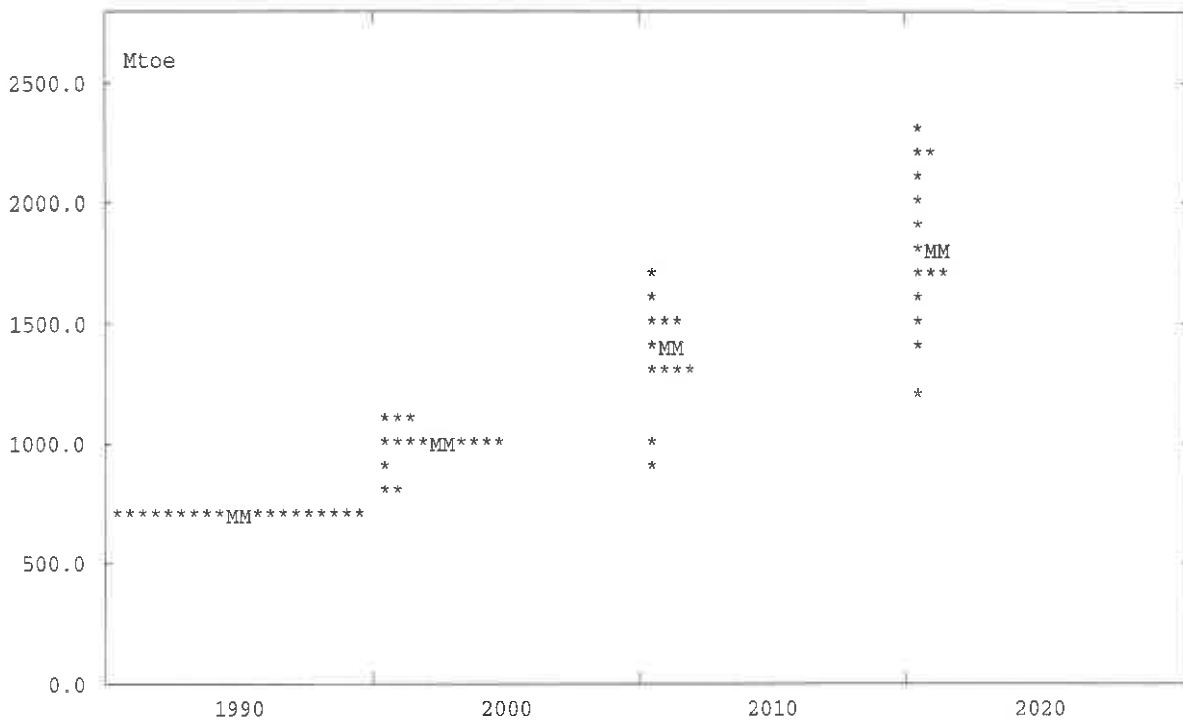
Real GNP (or GDP), China



Medians:	1990	2000	2010	2020
AMOCCH'93	100.0	284.0	672.0	1386.0
CWREF'93	100.0	248.0	535.0	1004.0
EWPOL'94	100.0	237.0	496.0	874.0
GRREF'93	100.0	236.0	488.0	690.0
IEA '94	100.0	234.0	449.0	607.8
INETH'95	100.0	228.0	428.0	573.0
INETL'95	100.0	218.0	419.0	573.0
ITREF'93	100.0	216.0	405.0	444.7
LBL '93	100.0	216.0	280.0	444.7
AMOCCL'93	100.0	216.0	262.0	444.7
MERGE'95	100.0	180.0	233.9	435.0
EIA '95	100.0	164.0	228.5	401.0
EWBAU'94	100.0	155.9	216.5	364.0
NEREF'94	100.0	155.9	207.8	354.0
NSUWG'94	100.0	149.2		327.4
TSREF'93	100.0	137.1		293.9
WECA '93	100.0			
WECB '93	100.0			
WECB1'93	100.0			
WECC '93	100.0			

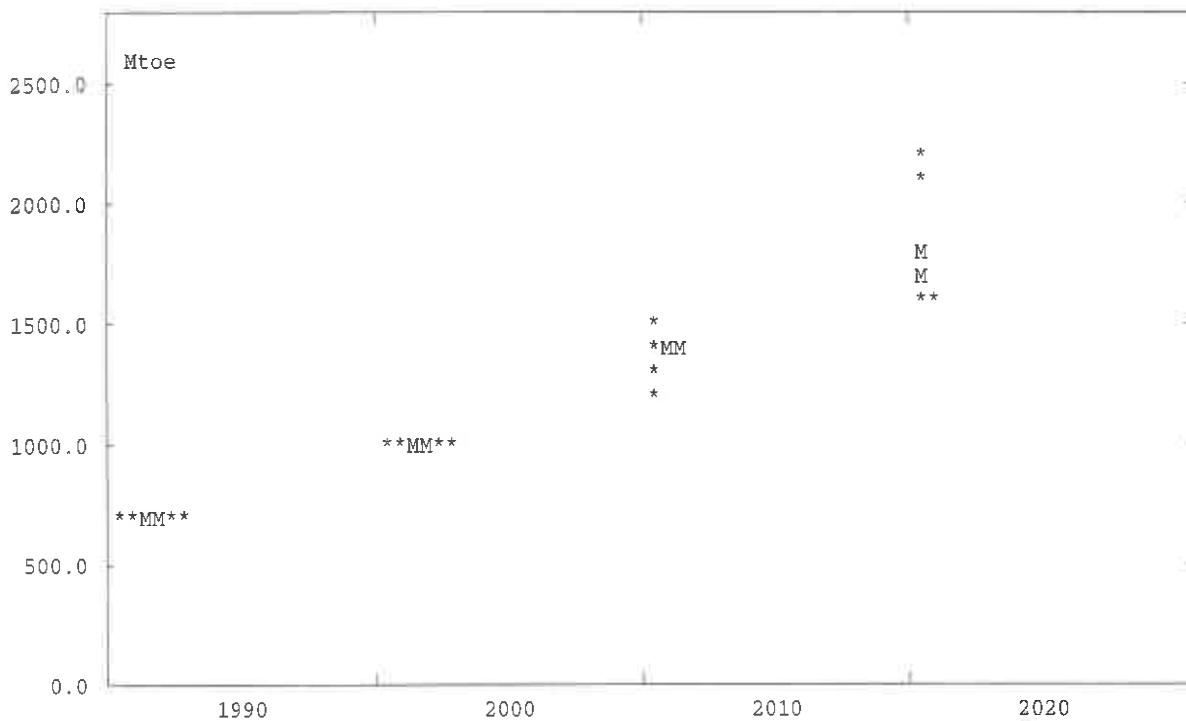


Total PE Consumption, China



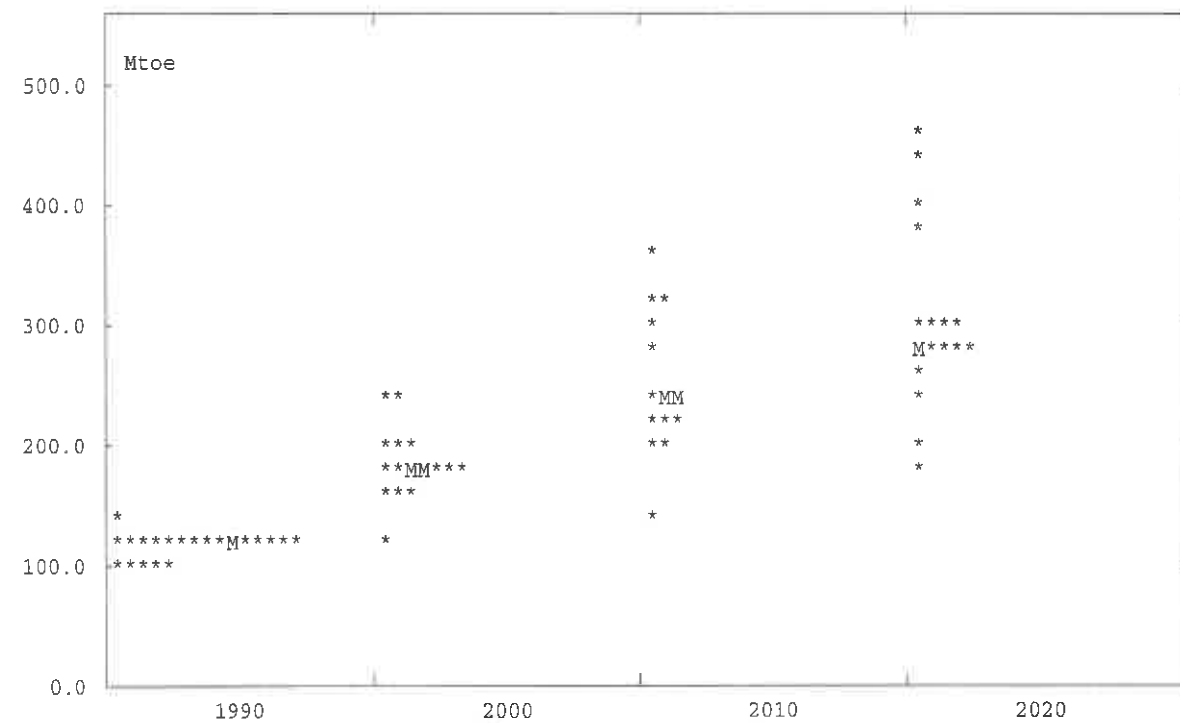
	1990	2000	2010	2020
Medians:	690.5	992.3	1408.5	1751.0
WECC '93	732.0 NSUWG'94	1092.0 NSUWG'94	1666.0 NSUWG'94	2310.0
WECA '93	732.0 INETH'95	1090.0 INETH'95	1620.0 INETH'95	2240.0
WECB1'93	732.0 AMOCH'93	1050.0 IEA '94	1487.0 GRREF'93	2224.2
WECB '93	732.0 AMOCL'93	1045.0 GRREF'93	1476.0 WECA '93	2071.0
NEREF'94	707.0 INETL'95	1030.0 INETL'95	1470.0 INETL'95	1960.0
CWREF'93	692.0 TSREF'93	1022.0 AMOCH'93	1418.0 CWREF'93	1868.0
LBL '93	691.0 EWBAU'94	1018.8 AMOCL'93	1417.0 TSREF'93	1760.0
NSUWG'94	691.0 EWPOL'94	1000.6 TSREF'93	1400.0 WECB '93	1751.0
INETL'95	691.0 IEA '94	984.0 LBL '93	1310.0 WECB1'93	1751.0
INETH'95	691.0 EIA '95	983.0 EIA '95	1307.0 LBL '93	1700.0
TSREF'93	690.0 NEREF'94	977.6 CWREF'93	1298.0 NEREF'94	1693.8
MERGE'95	683.4 LBL '93	966.0 NEREF'94	1265.1 EWBAU'94	1664.5
EWPOL'94	674.6 GRREF'93	964.5 ITREF'93	1028.9 WECC '93	1552.0
AMOCL'93	673.0 CWREF'93	916.0 MERGE'95	943.1 EWPOL'94	1516.2
AMOCH'93	673.0 MERGE'95	799.7	ITREF'93	1433.7
IEA '94	673.0 ITREF'93	792.6	MERGE'95	1187.4
EWBAU'94	672.9			
ITREF'93	662.8			
GRREF'93	662.8			
EIA '95	656.0			

Total PE Production, China



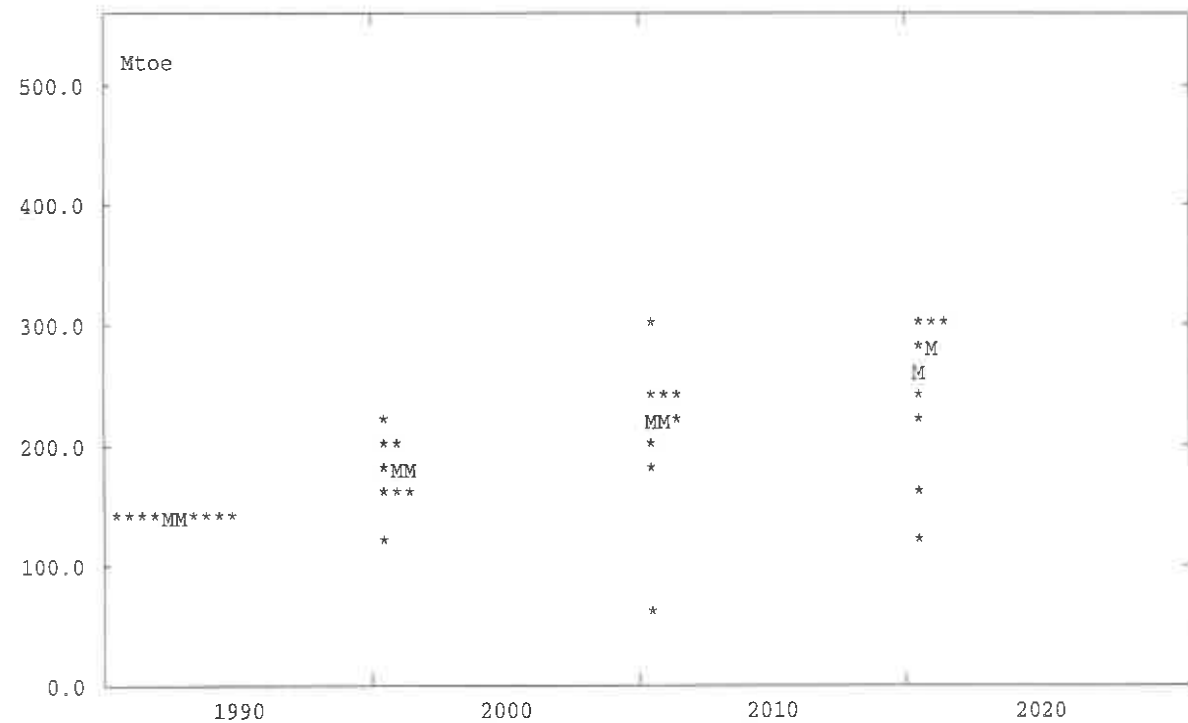
Medians:	724.5	991.8	1409.4	1755.0			
NEREF'94	734.7	INETH'95	1042.0	INETH'95	1512.0	GRREF'93	2178.2
INETL'95	727.0	TSREF'93	1040.0	INETL'95	1436.0	INETH'95	2068.0
INETH'95	727.0	INETL'95	1006.0	GRREF'93	1429.7	INETL'95	1818.0
TSREF'93	722.0	NEREF'94	977.6	TSREF'93	1389.0	TSREF'93	1692.0
LBL '93	720.0	LBL '93	974.0	LBL '93	1278.0	LBL '93	1640.0
GRREF'93	681.5	GRREF'93	962.7	NEREF'94	1179.2	NEREF'94	1629.8

Oil Consumption, China



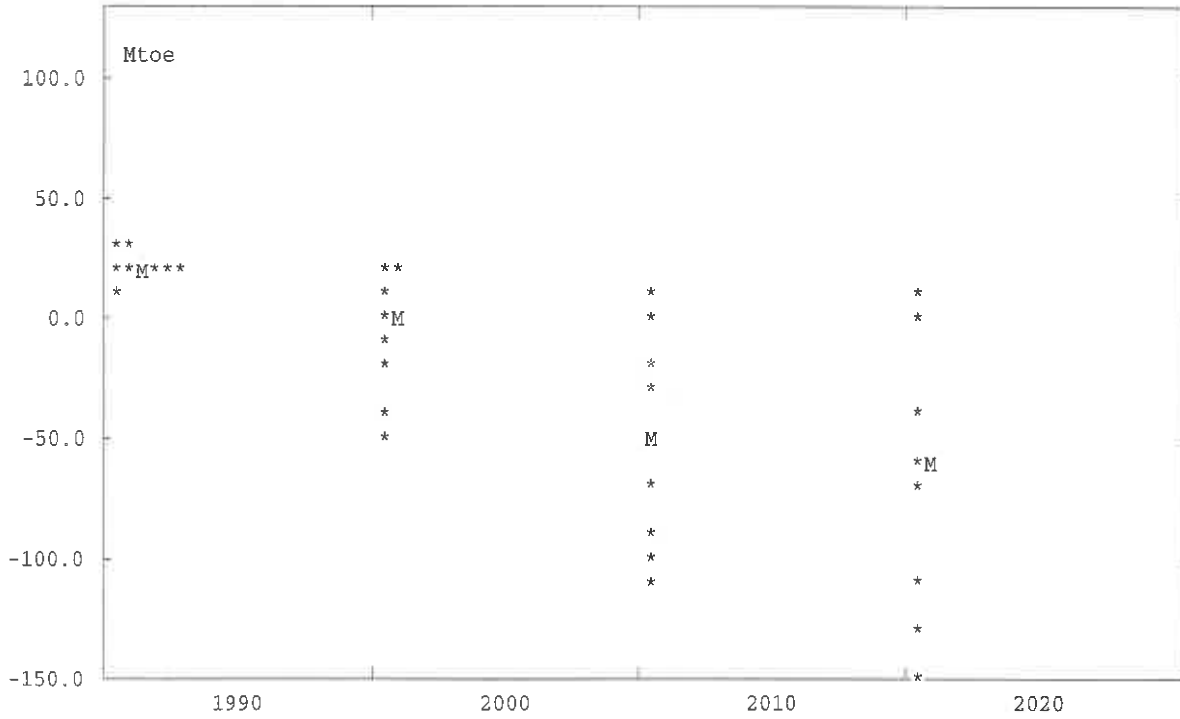
Medians:	1990	2000	2010	2020
GRREF '93	130.9	240.0	350.0	450.0
CWREF '93	122.0	230.0	320.0	440.0
MERGE '95	119.0	199.9	313.0	400.0
LBL '93	118.0	194.0	301.4	385.5
TSREF '93	117.3	193.0	286.9	309.8
IEA '94	117.0	188.0	236.8	299.8
NEREF '94	116.7	184.7	236.0	291.2
AMOCL '93	115.0	183.4	230.0	290.0
EIA '95	115.0	183.0	226.7	287.0
INETL '95	115.0	181.8	224.0	285.0
INETH '95	115.0	180.2	220.0	282.0
AMOCH '93	115.0	177.0	208.0	273.0
EWBAU '94	113.9	165.0	197.0	272.7
EWPOL '94	113.9	162.0	146.7	260.0
LYNCH '94	113.4	158.0		247.0
NSUWG '94	112.0	121.5		201.9
ITREF '93	108.1			179.9
WECA '93	100.0			
WECB '93	100.0			
WECB1 '93	100.0			
WECC '93	100.0			

Oil Production, China



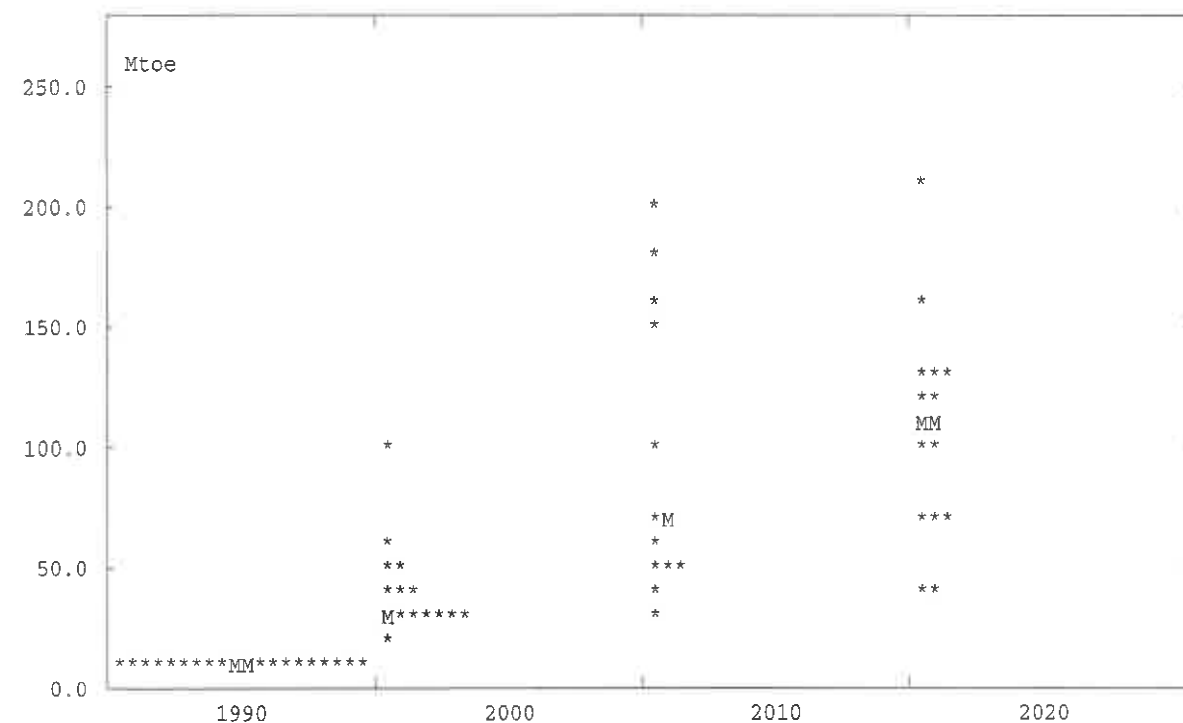
Medians:	1990	2000	2010	2020			
GRREF'93	149.0	ITREF'93	222.4	ITREF'93	301.4	MERGE'95	309.8
LYNCH'94	139.0	CWREF'93	207.0	CWREF'93	249.0	ITREF'93	299.8
LBL '93	139.0	INETH'95	190.0	INETH'95	240.0	CWREF'93	298.0
TSREF'93	138.3	INETL'95	185.0	MERGE'95	236.8	INETH'95	280.0
INETL'95	138.0	TSREF'93	180.0	INETL'95	220.0	LYNCH'94	277.6
INETH'95	138.0	GRREF'93	175.8	LYNCH'94	216.9	INETL'95	260.0
NEREF'94	137.7	LYNCH'94	169.4	TSREF'93	210.0	LBL '93	230.0
MERGE'95	136.3	MERGE'95	162.0	LBL '93	190.0	TSREF'93	220.0
ITREF'93	136.3	LBL '93	160.0	GRREF'93	175.3	GRREF'93	156.9
CWREF'93	135.0	NEREF'94	121.5	NEREF'94	60.8	NEREF'94	115.9

Oil Exports - Imports, China



Medians:	1990	2000	2010	2020
ITREF'93	28.2	22.5	13.0	13.0
LYNCH'94	25.6	15.0	0.0	0.0
INETH'95	23.0	13.0	-20.0	-45.0
INETL'95	23.0	2.0	-30.0	-57.0
TSREF'93	21.0	0.0	-51.4	-64.1
LBL '93	21.0	-6.0	-70.0	-70.0
NEREF'94	21.0	-15.3	-85.9	-107.9
GRREF'93	18.1	-45.0	-100.0	-130.0
CWREF'93	13.0	-50.0	-110.0	-150.0

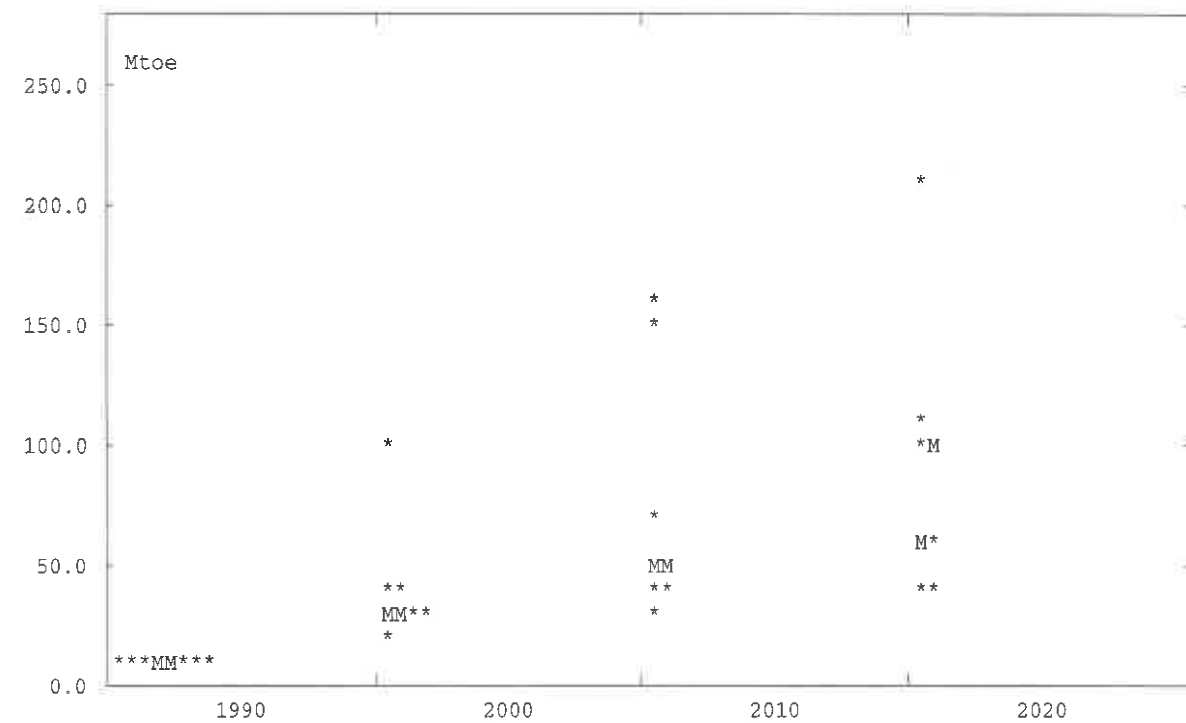
Natural Gas Consumption, China



	1990	2000	2010	2020
Medians:	14.0	34.2	72.0	107.7

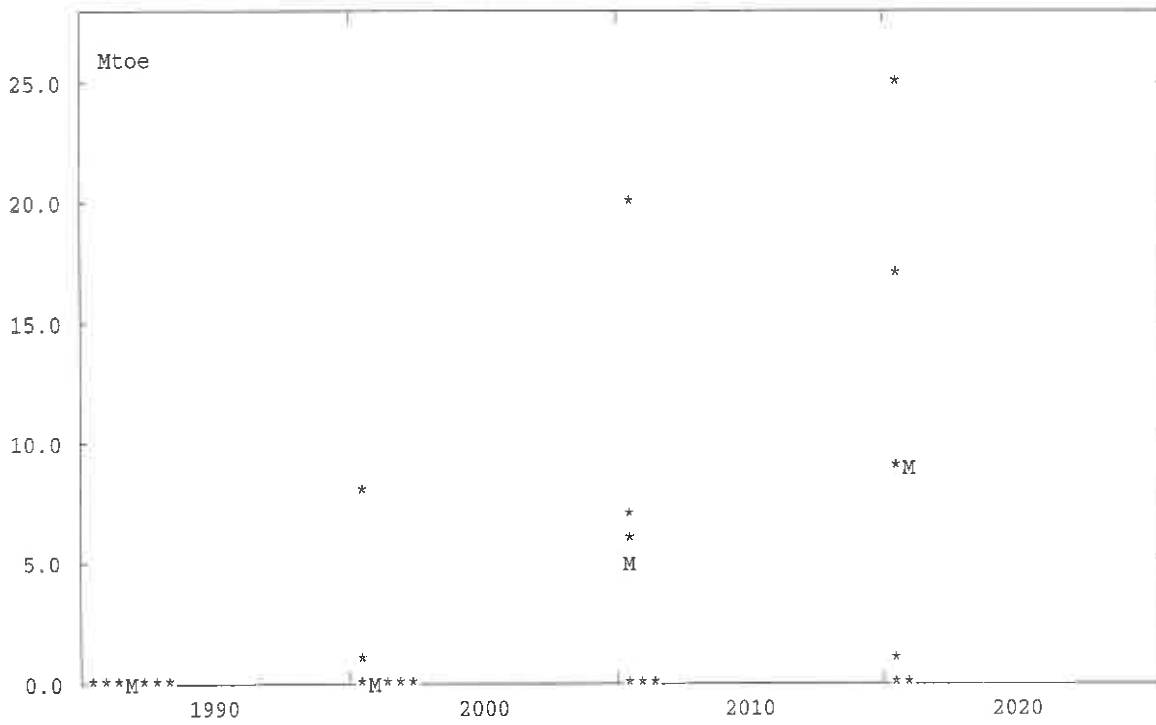
TSREF'93	14.2	ITREF'93	97.6	AMOCH'93	200.0	ITREF'93	214.6
EWPOL'94	14.1	CWREF'93	58.0	AMOCL'93	175.0	WECA '93	163.0
ITREF'93	14.1	AMOCL'93	50.0	ITREF'93	157.2	LBL '93	127.0
EWBAU'94	14.1	AMOCH'93	45.0	MERGE'95	147.0	WECEB '93	126.0
MERGE'95	14.1	MERGE'95	41.0	CWREF'93	101.0	WECB1'93	125.0
NSUWG'94	14.0	NEREF'94	40.9	LBL '93	73.0	CWREF'93	120.0
INETL'95	14.0	LBL '93	36.0	TSREF'93	72.0	TSREF'93	115.0
INETH'95	14.0	EWBAU'94	34.2	IEA '94	55.0	MERGE'95	108.4
WECC '93	14.0	EWPOL'94	34.2	INETH'95	50.0	NSUWG'94	107.0
WECA '93	14.0	EIA '95	31.0	NEREF'94	48.0	EWBAU'94	99.1
LBL '93	14.0	INETH'95	30.0	INETL'95	47.0	EWPOL'94	99.1
WECB1'93	14.0	TSREF'93	28.0	EIA '95	40.0	WECC '93	71.0
WECEB '93	14.0	INETL'95	28.0	GRREF'93	28.6	INETH'95	70.0
GRREF'93	13.9	IEA '94	28.0			INETL'95	65.0
IEA '94	13.0	GRREF'93	19.8			NEREF'94	43.1
AMOCL'93	13.0					GRREF'93	40.1
AMOCH'93	13.0						
NEREF'94	12.3						
EIA '95	12.0						
CWREF'93	12.0						

Natural Gas Production, China



Medians:	1990	2000	2010	2020
TSREF'93	14.2	ITREF'93 97.6	ITREF'93 157.2	ITREF'93 214.6
ITREF'93	14.1	MERGE'95 41.0	MERGE'95 147.0	MERGE'95 108.4
MERGE'95	14.1	NEREF'94 40.9	TSREF'93 65.0	LBL '93 102.0
LBL '93	14.0	INETH'95 31.0	LBL '93 53.0	TSREF'93 98.0
INETH'95	14.0	TSREF'93 28.0	NEREF'94 48.0	INETH'95 61.0
INETL'95	14.0	INETL'95 28.0	INETL'95 44.0	INETL'95 56.0
GRREF'93	13.8	LBL '93 28.0	INETL'95 42.0	NEREF'94 43.1
NEREF'94	12.3	GRREF'93 19.8	GRREF'93 28.4	GRREF'93 39.5

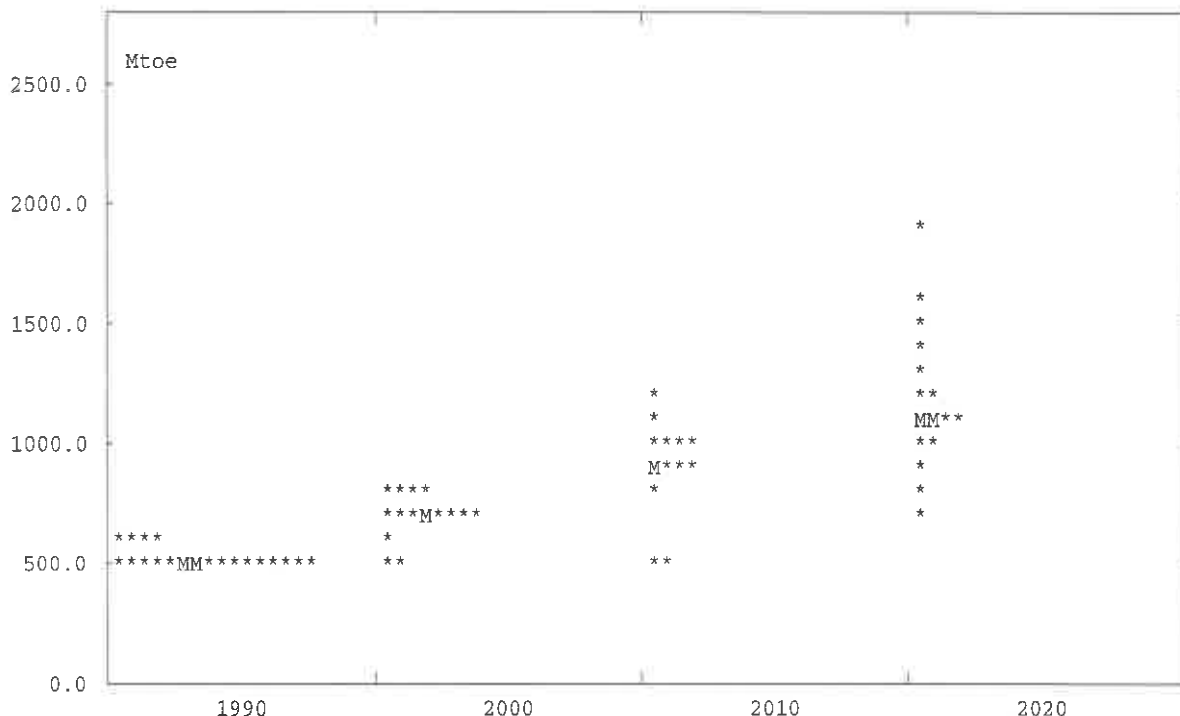
Natural Gas Imports - Exports, China



Medians:	1990	2000	2010	2020
GRREF'93	0.1	8.0	20.0	25.0
NEREF'94	0.0	1.0	7.0	17.0
TSREF'93	0.0	0.0	6.0	9.0
INETH'95	0.0	0.0	5.0	9.0
INETL'95	0.0	0.0	0.3	0.5
ITREF'93	0.0	0.0	0.0	0.0
LBL '93	0.0	-0.0	0.0	0.0

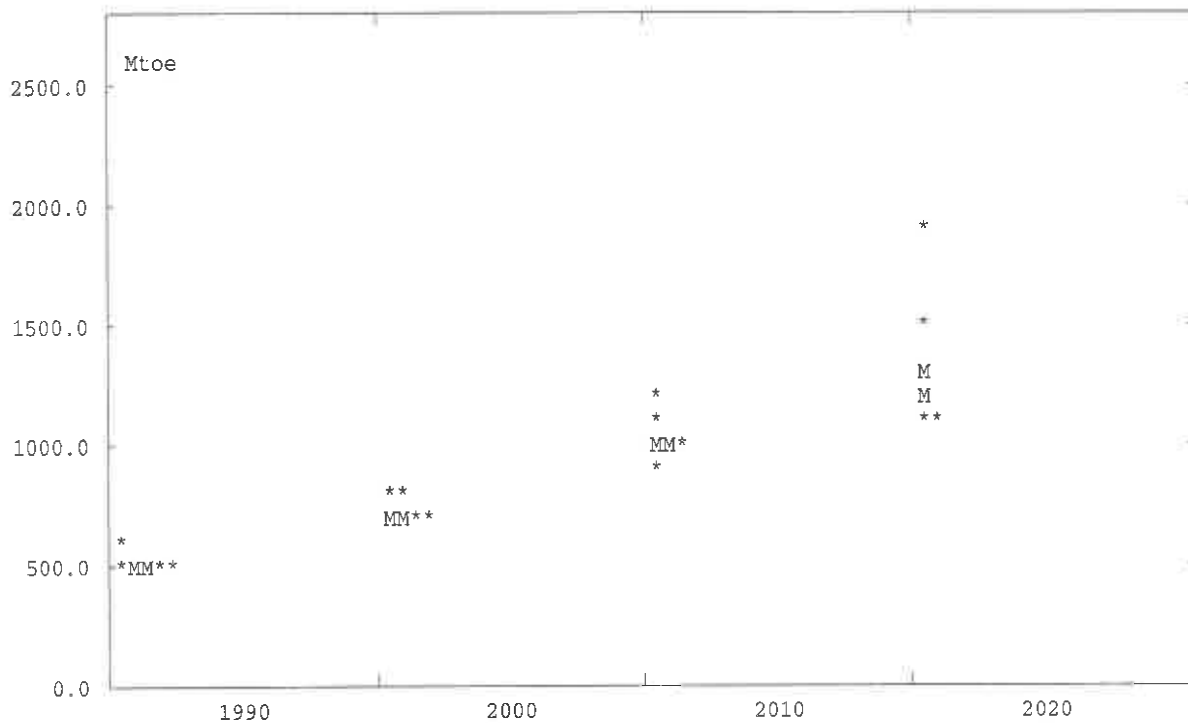


Coal Consumption, China



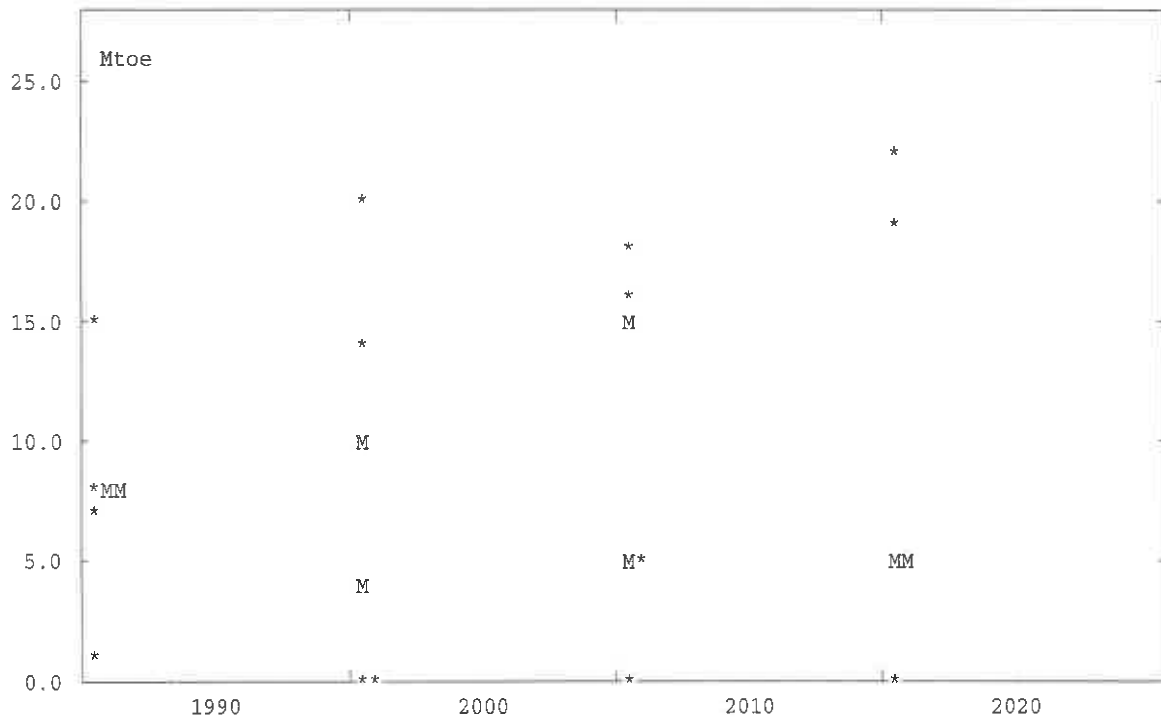
Medians:	1990	2000	2010	2020
WECC '93	575.0	753.4	1183.9	1936.2
WECA '93	575.0	752.0	1062.0	1550.0
WECB1 '93	575.0	750.0	995.0	1463.0
WECB '93	575.0	750.0	964.4	1408.0
NEREF '94	543.5	739.0	958.0	1274.0
LBL '93	532.0	731.2	957.0	1237.1
TSREF '93	529.2	720.5	944.0	1154.0
INETL '95	528.0	705.2	930.0	1141.0
INETH '95	528.0	705.0	905.0	1121.0
NSUWG '94	527.0	699.0	890.0	1108.0
CWREF '93	517.0	693.0	812.0	1067.0
AMOCL '93	516.0	686.0	532.9	1036.6
AMOCH '93	516.0	601.0	499.2	967.0
IEA '94	515.0	547.3		881.9
EWPOL '94	511.1	458.4		797.7
EWBAU '94	510.8			680.9
MERGE '95	509.5			
ITREF '93	504.5			
EIA '95	498.0			
GRREF '93	491.9			

Coal Production, China



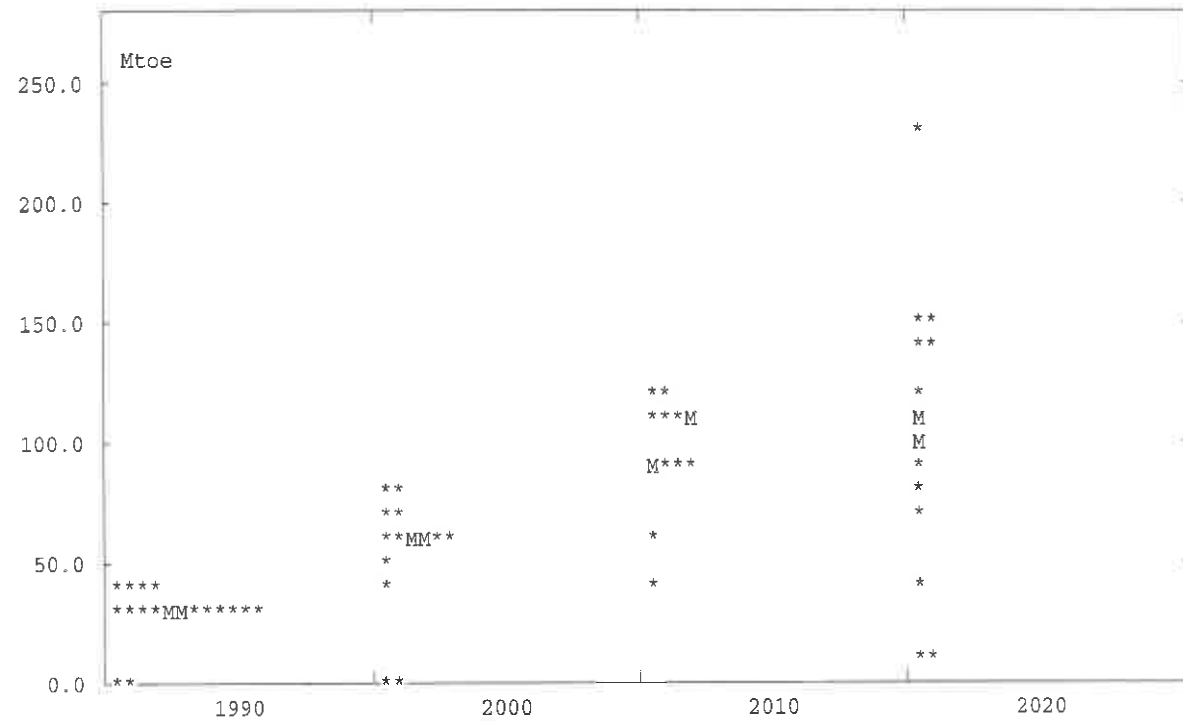
Medians:	540.0	737.7	997.2	1258.6			
NEREF'94	550.2	TSREF'93	772.0	GRREF'93	1189.3	GRREF'93	1935.6
TSREF'93	544.2	NEREF'94	753.4	INETH'95	1070.0	INETH'95	1470.0
LBL '93	540.0	INETH'95	740.0	INETL'95	1030.0	INETL'95	1280.0
INETL'95	540.0	GRREF'93	735.4	NEREF'94	964.4	NEREF'94	1237.1
INETH'95	540.0	INETL'95	715.0	TSREF'93	960.0	TSREF'93	1140.0
GRREF'93	492.6	LBL '93	700.0	LBL '93	923.0	LBL '93	1130.0

Coal Exports - Imports, China



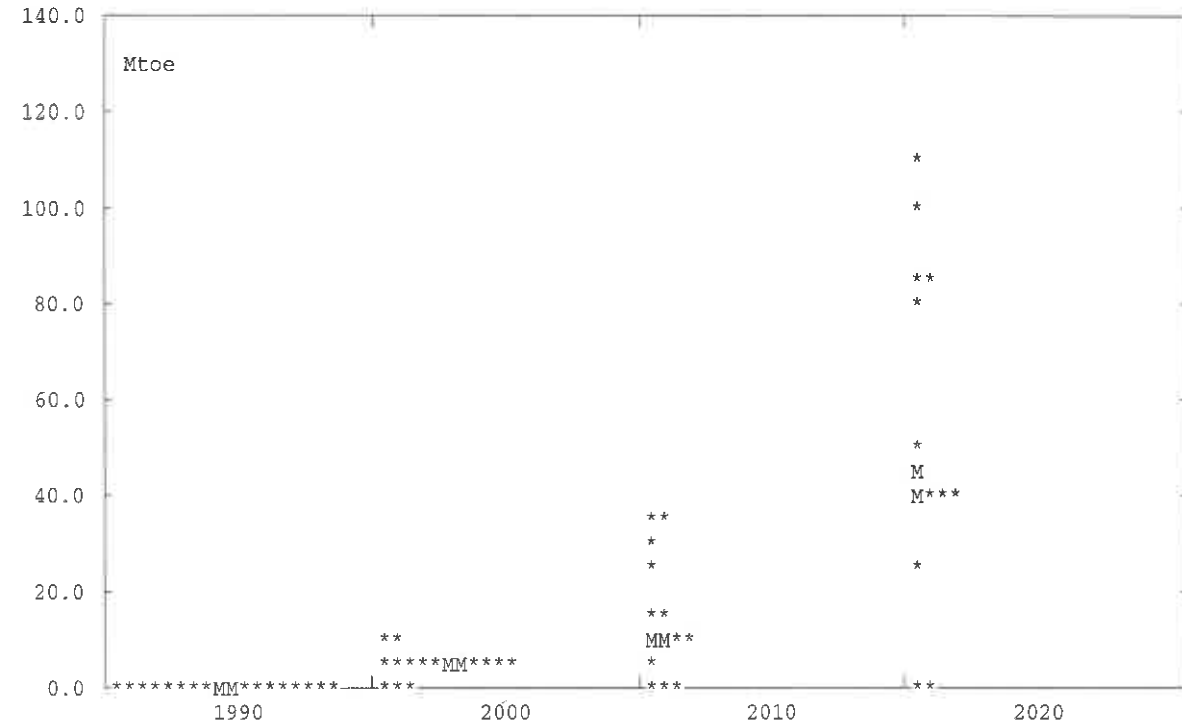
Medians:	8.0	7.1	10.2	5.0			
TSREF'93	15.0	TSREF'93	20.0	LBL '93	18.0	LBL '93	22.0
LBL '93	8.0	LBL '93	14.0	TSREF'93	16.0	TSREF'93	19.0
INETH'95	8.0	INETL'95	10.0	INETL'95	15.0	INETH'95	5.0
INETL'95	8.0	GRREF'93	4.2	GRREF'93	5.4	INETL'95	5.0
NEREF'94	6.7	INETH'95	0.0	INETH'95	5.0	NEREF'94	0.0
GRREF'93	0.7	NEREF'94	0.0	NEREF'94	0.0	GRREF'93	-0.6

Renewables, Electric, China



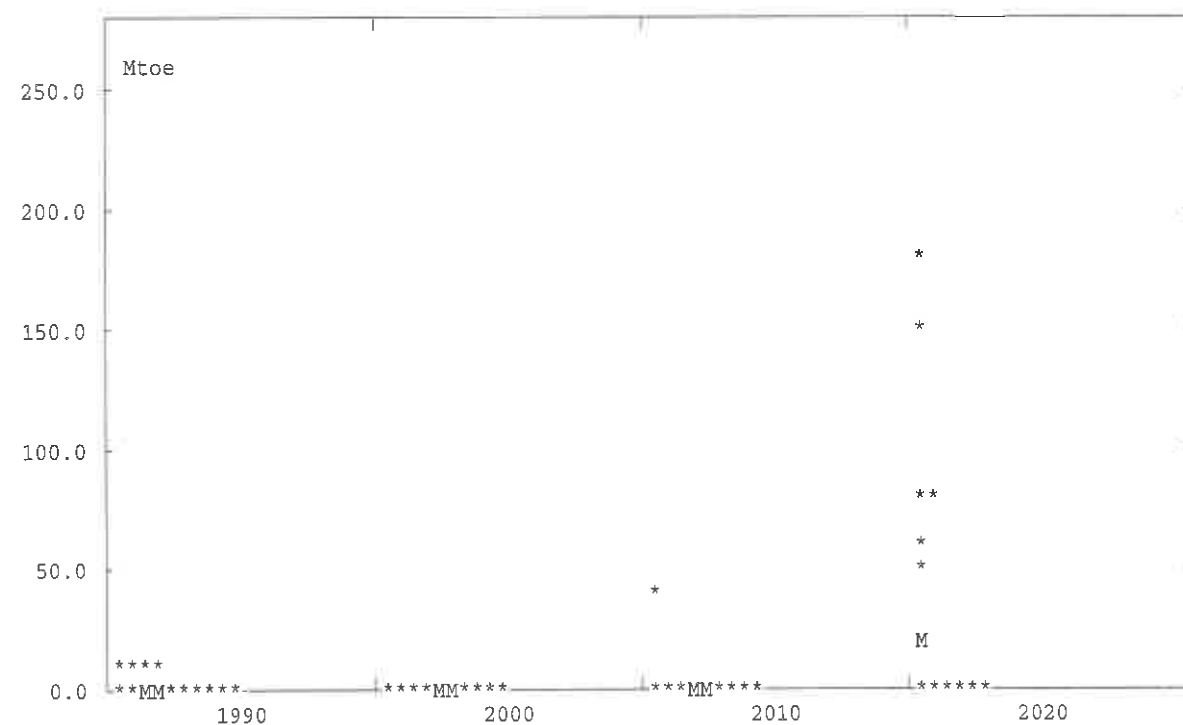
Medians:	1990	2000	2010	2020
CWREF'93	41.0	75.0	121.0	233.7
MERGE'95	40.8	75.0	116.0	152.0
ITREF'93	36.2	73.5	112.0	145.0
LBL '93	36.0	68.0	108.0	137.0
NEREF'94	34.5	63.0	106.1	136.5
INETL'95	34.0	63.0	106.0	124.0
INETH'95	34.0	61.8	94.0	105.0
EIA '95	31.0	61.0	94.0	104.0
AMOCH'93	30.0	60.0	88.0	91.0
AMOCL'93	30.0	60.0	86.0	76.0
WECEB '93	30.0	49.3	57.6	65.8
WECEB1'93	30.0	36.8	37.5	38.5
WECC '93	30.0	1.8		7.7
WECA '93	30.0	1.4		5.3
TSREF'93	29.0			
IEA '94	28.0			
EWPOL'94	0.0			
EWBAU'94	0.0			

Nuclear Energy, China



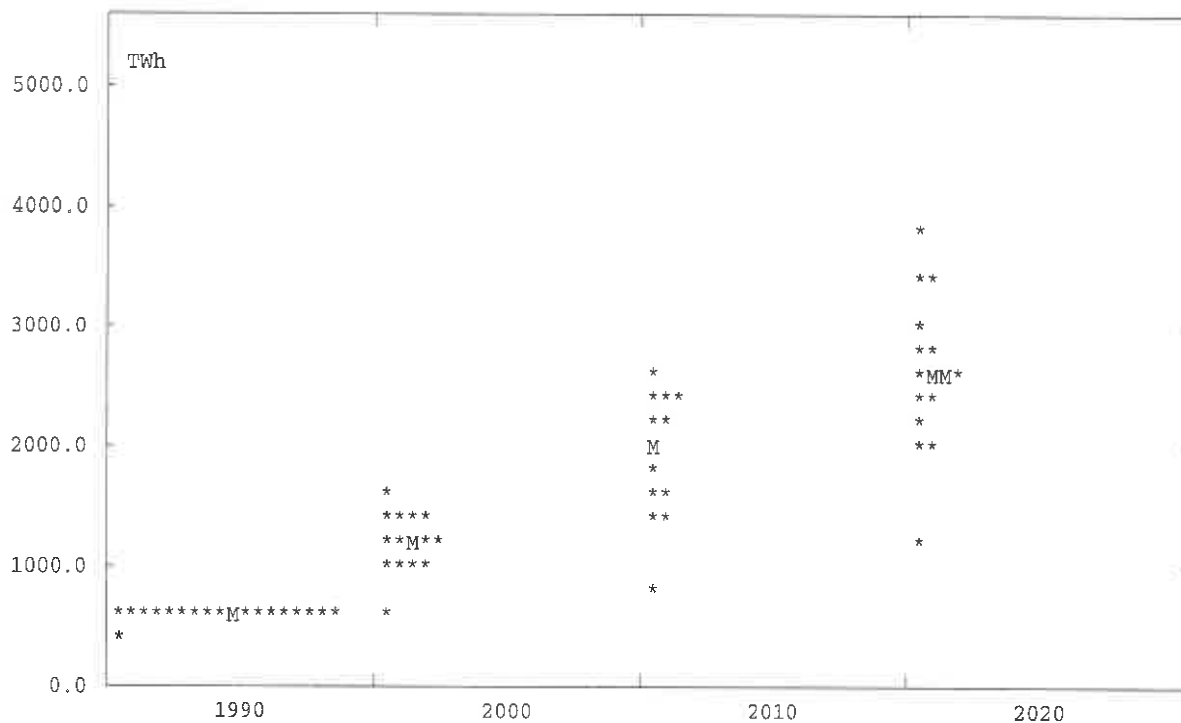
Medians:	1990	2000	2010	2020
EWPOL'94	0.0	4.8	11.1	43.0
AMOCH'93	0.0	10.0	36.0	110.0
CWREF'93	0.0	9.0	36.0	99.9
INETH'95	0.0	6.1	32.0	85.6
INETL'95	0.0	6.1	23.0	83.0
ITREF'93	0.0	5.4	15.0	78.0
LBL '93	0.0	5.0	15.0	49.0
IEA '94	0.0	5.0	12.3	46.0
MERGE'95	0.0	5.0	10.0	40.0
EIA '95	0.0	4.6	10.0	40.0
EWBAU'94	0.0	3.1	9.4	38.0
NEREF'94	0.0	3.1	7.0	38.0
AMOCL'93	0.0	3.0	7.0	24.7
TSREF'93	0.0	3.0	0.0	0.0
WECA '93	0.0	0.0	0.0	0.0
WECB '93	0.0	0.0	0.0	0.0
WECB1'93	0.0	0.0	0.0	0.0
WECC '93	0.0	0.0	0.0	0.0

Renewables, Nonelectric, China



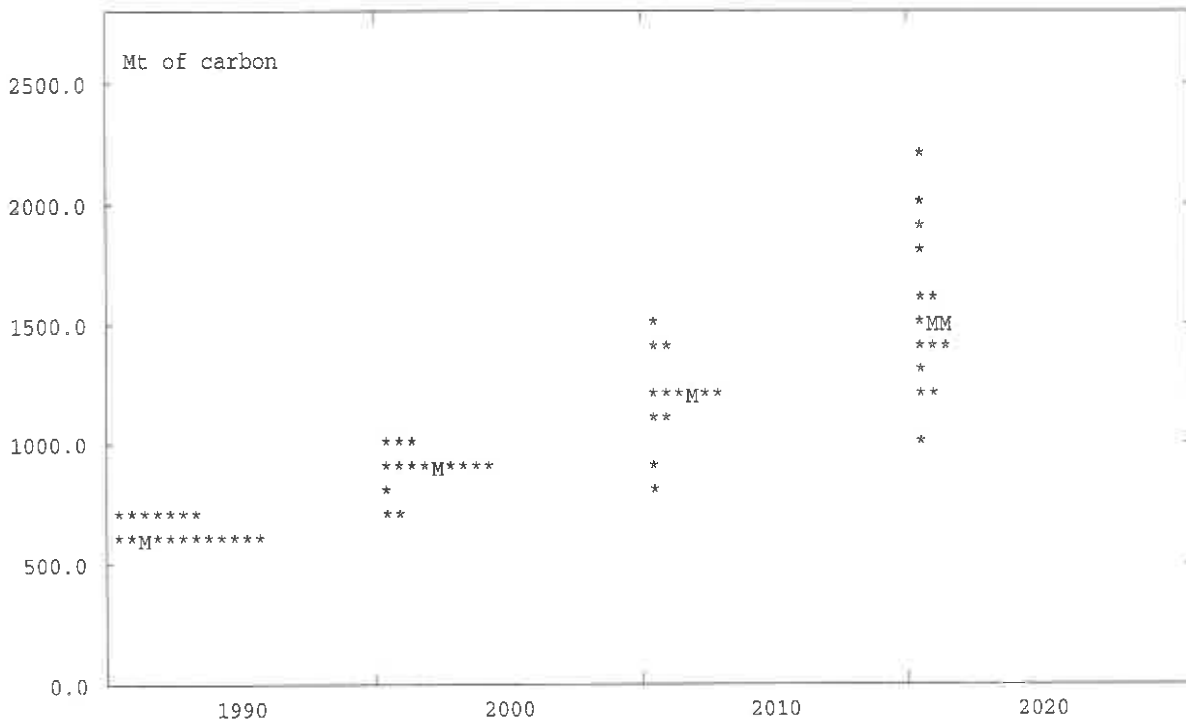
Medians:	1990	2000	2010	2020
WECC '93	13.0	0.6	38.0	175.0
WECA '93	13.0	0.4	2.5	154.0
WECB1 '93	13.0	0.3	1.8	80.0
WECB '93	13.0	0.1	0.8	80.0
TSREF '93	0.2	0.0	0.6	58.8
INETL '95	0.1	0.0	0.4	54.0
INETH '95	0.1	0.0	0.0	22.5
CWREF '93	0.0	0.0	0.0	4.0
MERGE '95	0.0	0.0	0.0	2.2
NEREF '94	0.0	0.0	0.0	1.9
GRREF '93	0.0	0.0	0.0	1.2
IEA '94	0.0	0.0	0.0	0.0
ITREF '93	0.0	0.0	0.0	0.0
LBL '93	0.0	0.0	0.0	0.0

Electricity Generation, China



Medians:	1990	2000	2010	2020
WECC '93	699.0	1500.0	2550.0	3840.0
WECA '93	699.0	1400.0	2450.0	3450.0
WECB '93	699.0	1300.0	2430.0	3400.0
WECB1 '93	699.0	1300.0	2300.0	3000.0
MERGE '95	651.0	1300.0	2150.0	2888.0
NEREF '94	647.1	1204.0	2100.0	2877.0
TSREF '93	623.0	1200.0	2094.0	2653.0
EWPOL '94	623.0	1161.9	1773.0	2653.0
NSUWG '94	623.0	1148.6	1566.5	2645.6
EWBAU '94	623.0	1115.3	1560.0	2531.8
AMOCL '93	621.0	1015.0	1416.9	2405.6
IEA '94	621.0	1012.0	1407.7	2340.0
AMOCH '93	621.0	966.7	851.8	2205.0
INETH '95	621.0	910.2		2012.0
INETL '95	621.0	562.3		2004.3
LBL '93	619.0			1228.2
CWREF '93	618.0			
ITREF '93	587.0			
GRREF '93	497.6			

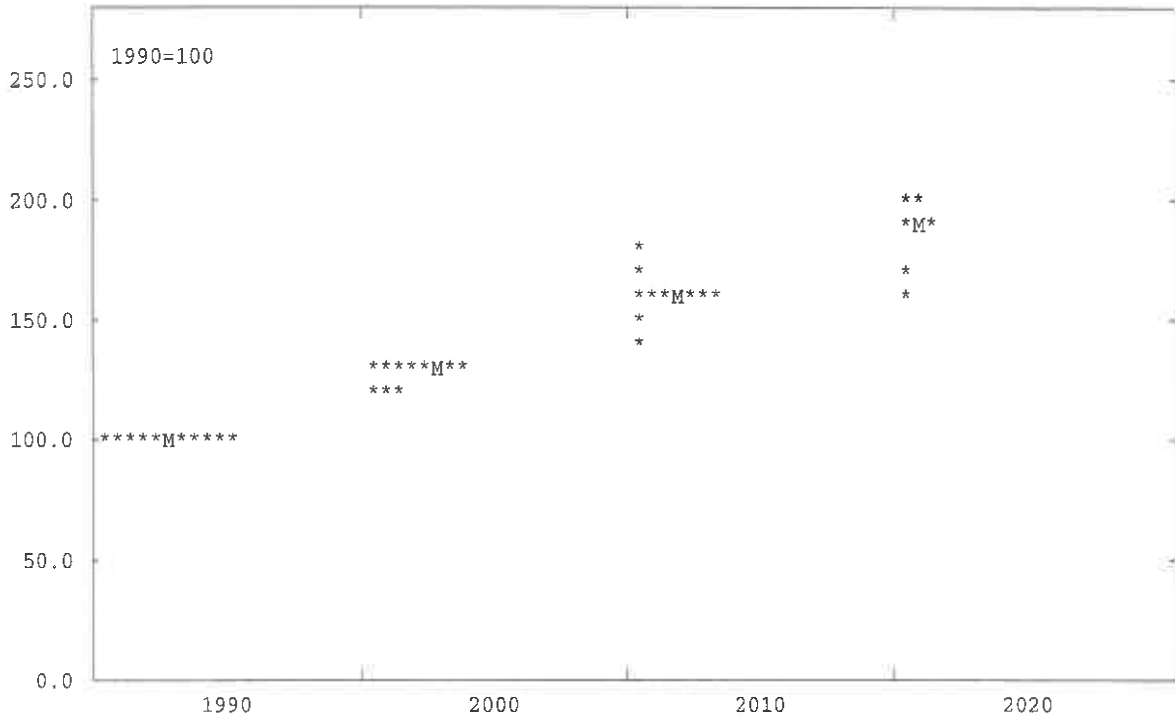
Carbon Emissions, China



	1990	2000	2010	2020			
Medians:	639.0	888.2	1223.0	1474.5			
WECC '93	716.9	NSUWG'94	987.0	NSUWG'94	1512.0	GRREF'93	2171.2
WECEB1'93	716.9	AMOCH'93	955.0	GRREF'93	1378.4	NSUWG'94	2045.0
WECA '93	716.9	AMOCL'93	950.0	INETH'95	1352.0	WECA '93	1867.6
WECH '93	716.9	EIA '95	944.0	AMOCL'93	1240.0	INETH'95	1841.0
NEREF'94	653.5	INETH'95	935.0	EIA '95	1237.0	INETL'95	1610.0
LBL '93	652.0	TSREF'93	911.0	AMOCH'93	1226.0	WECEB '93	1560.6
NSUWG'94	650.0	EWBAU'94	906.6	INETL'95	1223.0	WECEB1'93	1535.5
EIA '95	648.0	EWPOL'94	888.2	TSREF'93	1184.0	LBL '93	1480.0
CWREF'93	641.0	GRREF'93	884.4	LBL '93	1175.0	CWREF'93	1469.0
TSREF'93	639.0	INETL'95	880.0	CWREF'93	1105.0	TSREF'93	1436.0
AMOCL'93	635.0	NEREF'94	871.0	NEREF'94	1103.7	NEREF'94	1397.9
AMOCH'93	635.0	LBL '93	870.0	ITREF'93	900.9	EWBAU'94	1353.8
EWPOL'94	625.8	CWREF'93	815.0	MERGE'95	799.3	WECC '93	1300.7
EWBAU'94	625.8	MERGE'95	723.3			ITREF'93	1204.8
INETL'95	625.0	ITREF'93	703.4			EWPOL'94	1178.6
INETH'95	625.0					MERGE'95	1025.2
ITREF'93	624.0						
MERGE'95	623.0						
GRREF'93	600.6						

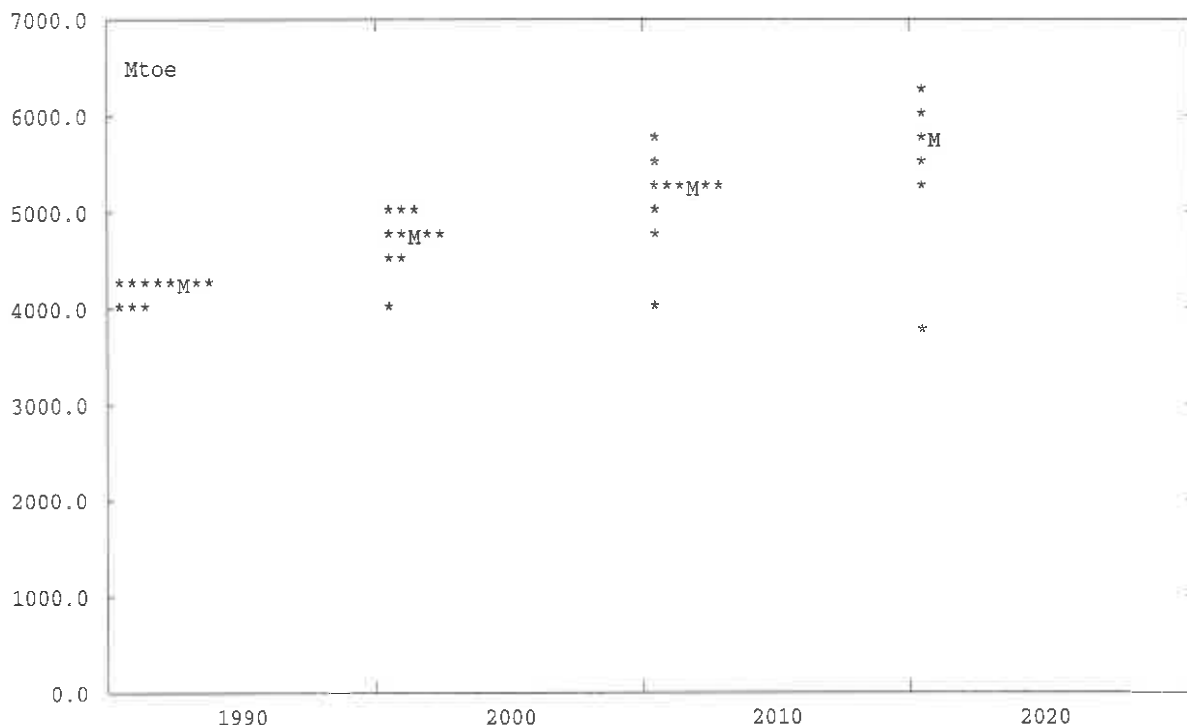


Real GNP (or GDP), OECD



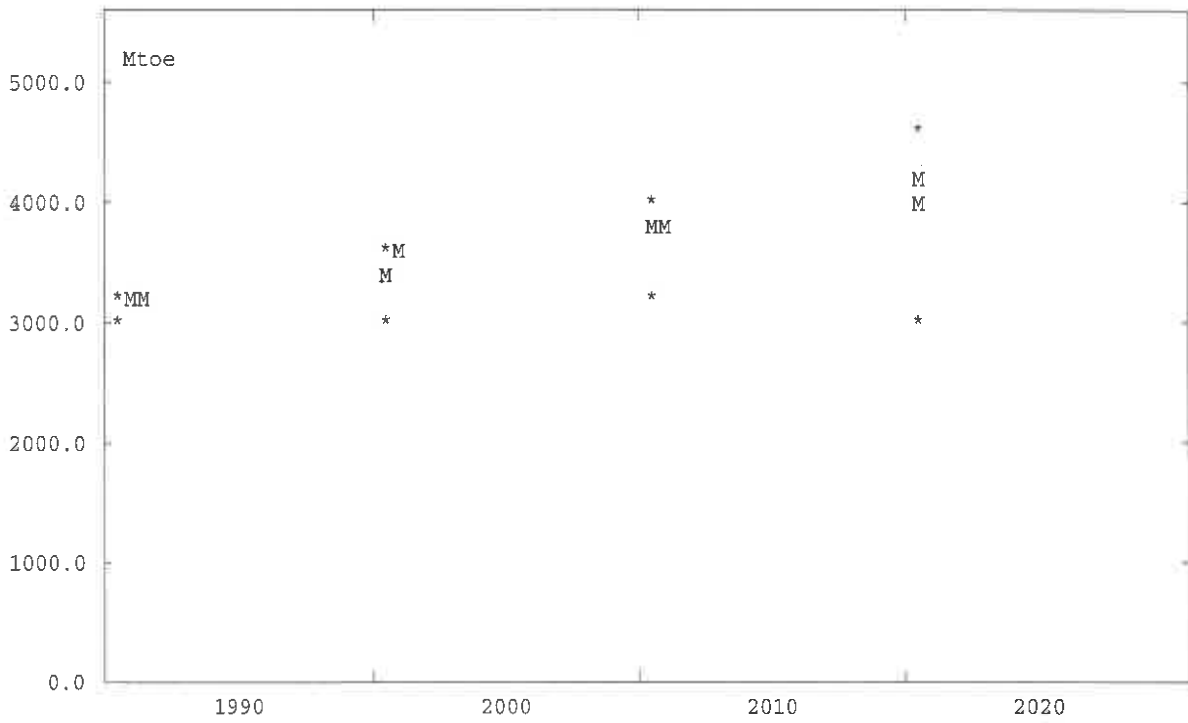
Medians:	1990	2000	2010	2020			
AMOCL'93	100.0	MERGE'95	131.5	AMOC'93	175.0	MERGE'95	204.7
AMOC'93	100.0	AMOC'93	131.0	AMOC'93	167.0	OWREF'95	197.8
ECSB '95	100.0	ITREF'93	129.4	MERGE'95	162.7	ECSA '95	192.0
CWREF'93	100.0	ECSA '95	128.1	EIA '95	159.0	ITREF'93	191.0
EIA '95	100.0	CWREF'93	128.0	OWREF'95	158.8	CWREF'93	190.0
IEA '94	100.0	AMOC'93	127.0	ECSA '95	158.5	ECSB '95	174.8
ITREF'93	100.0	OWREF'95	125.2	ITREF'93	157.3	ECSC '95	162.9
ECSA '95	100.0	EIA '95	125.0	IEA '94	156.0		
MERGE'95	100.0	ECSB '95	123.8	CWREF'93	156.0		
ECSC '95	100.0	IEA '94	123.0	ECSB '95	148.7		
OWREF'95	100.0	ECSC '95	120.7	ECSC '95	141.6		

Total PE Consumption, OECD



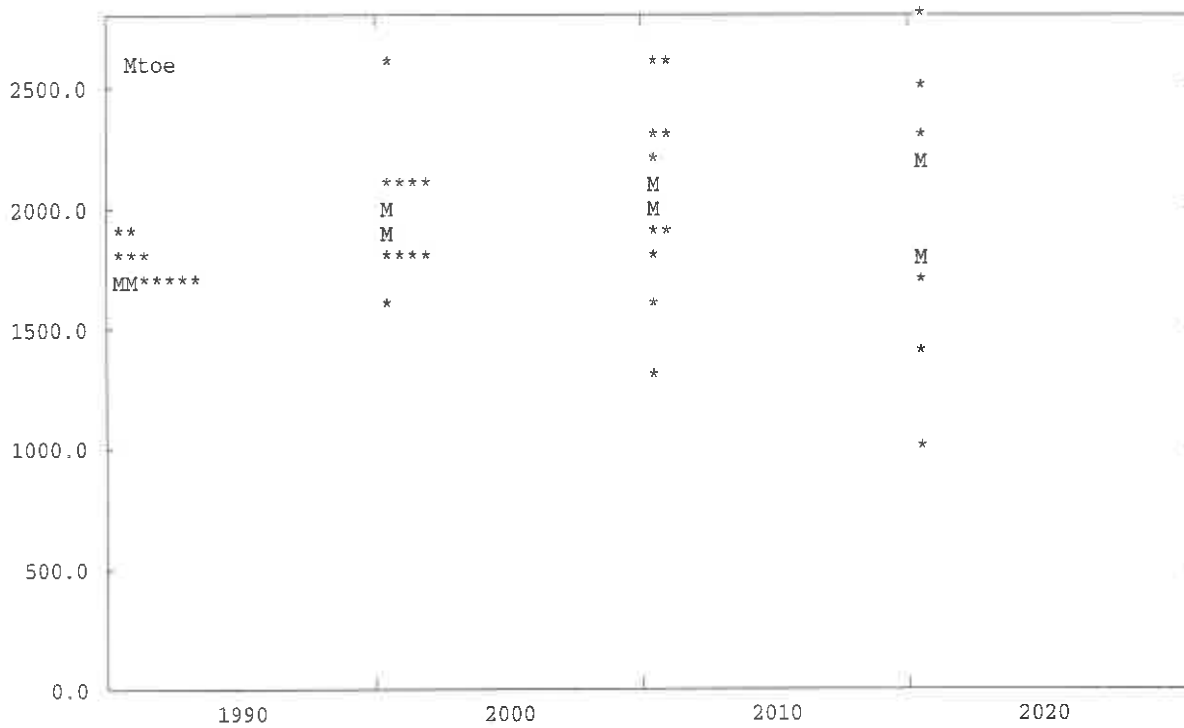
Medians:	1990	2000	2010	2020
EIA '95	4321.0	5104.0	5720.0	6198.7
AMOCL'93	4274.0	5041.0	5619.0	6080.3
AMOCH'93	4274.0	4883.0	5362.8	5709.3
ECSCB '95	4181.0	4872.8	5359.0	5680.3
ECSC '95	4181.0	4771.0	5351.0	5417.0
ECSCA '95	4181.0	4738.0	5346.5	5245.0
OWREF'95	4165.1	4733.0	5246.3	3728.7
IEA '94	4163.0	4718.2	5240.0	
ITREF'93	4115.2	4615.7	4952.1	
MERGE'95	4068.4	4402.0	4828.0	
CWREF'93	4004.0	4076.5	3918.5	

Total PE Production, OECD



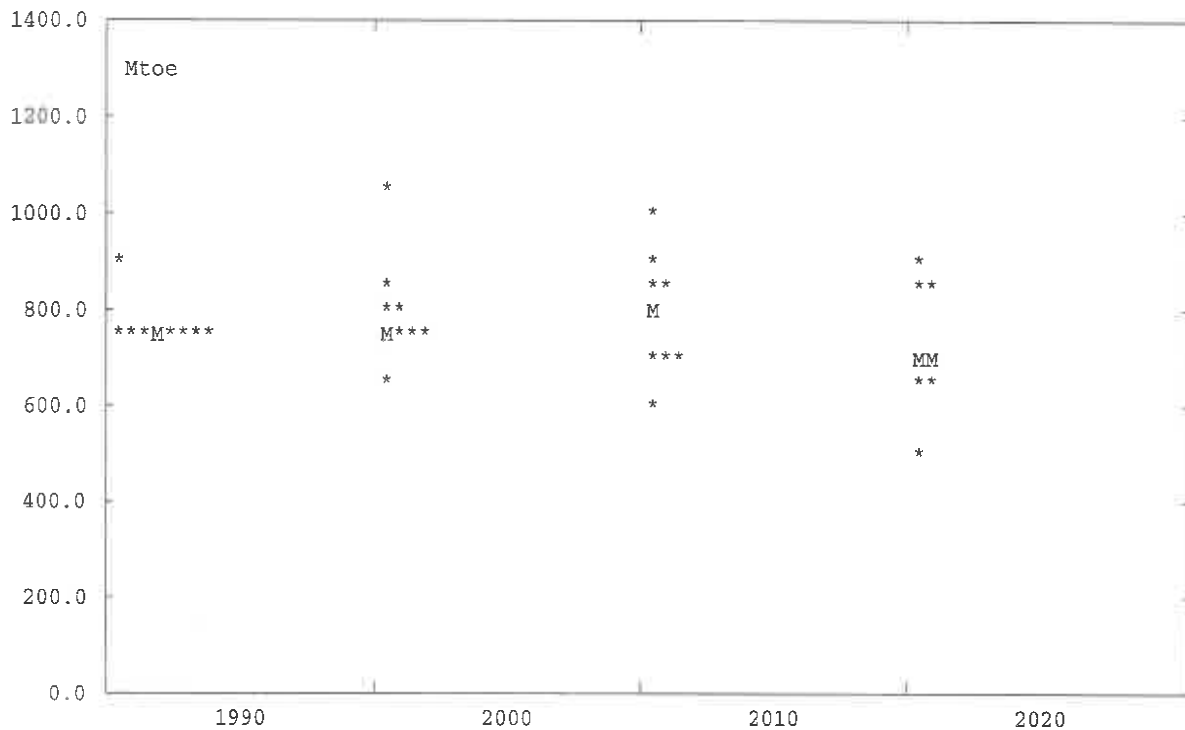
Medians:	3106.8		3492.3		3876.4		4130.6
ECSA '95	3106.8	OWREF '95	3641.4	ECSA '95	4036.1	ECSA '95	4518.0
ECSB '95	3106.8	ECSA '95	3569.6	OWREF '95	3885.0	ECSB '95	4239.6
ECSC '95	3106.8	ECSE '95	3415.0	ECSC '95	3867.7	OWREF '95	4021.7
OWREF '95	3087.2	ECSC '95	3075.3	ECSC '95	3124.1	ECSC '95	3032.3

Oil Consumption, OECD



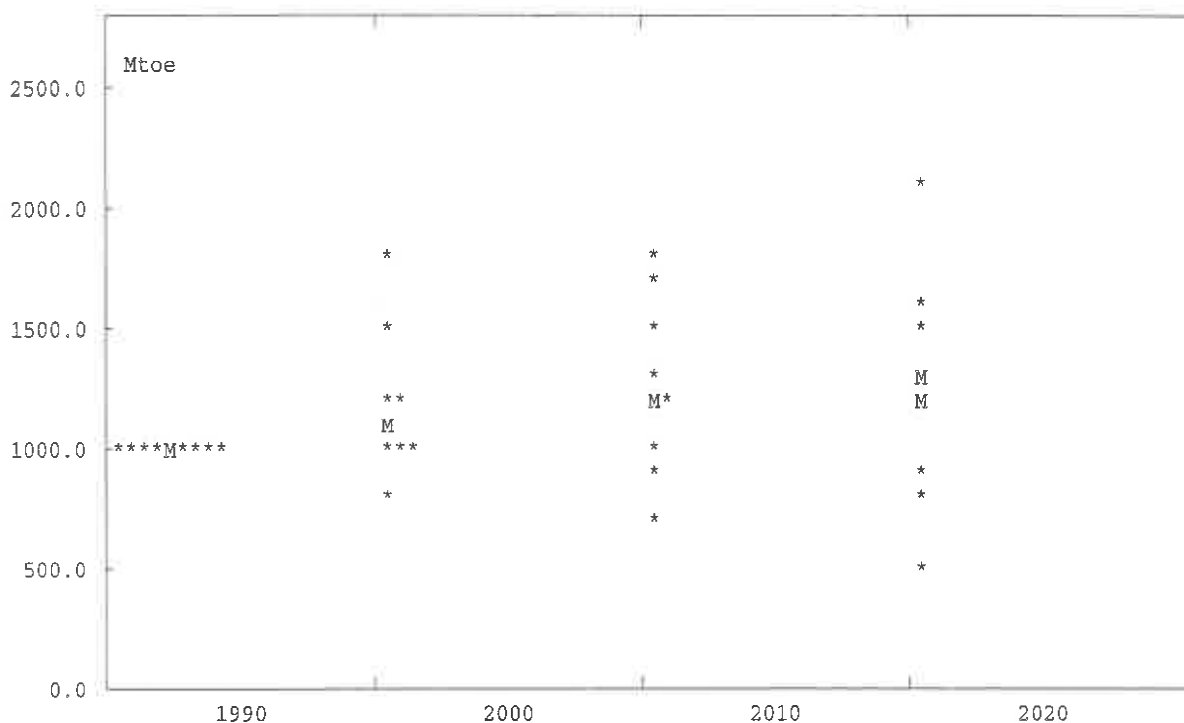
Medians:	1990	2000	2010	2020
EIA '95	1874.0	ITREF'93 2622.8	ITREF'93 2635.1	MERGE'95 2769.2
OWREF'95	1860.8	MERGE'95 2125.5	MERGE'95 2569.9	LYNCH'94 2478.8
CWREF'93	1769.0	EIA '95 2107.0	LYNCH'94 2334.8	ITREF'93 2250.6
MERGE'95	1752.5	LYNCH'94 2073.7	EIA '95 2309.0	OWREF'95 2161.2
LYNCH'94	1752.5	OWREF'95 2056.9	AMOC'93 2168.0	CWREF'93 1798.0
ITREF'93	1732.2	AMOC'93 2018.0	OWREF'95 2144.7	ECSA '95 1724.9
AMOC'93	1724.0	IEA '94 1925.0	IEA '94 2021.0	ECSC '95 1410.5
AMOC'93	1724.0	AMOC'93 1841.0	CWREF'93 1864.0	ECSC '95 968.3
ECSC '95	1722.6	CWREF'93 1839.0	AMOC'93 1860.0	
ECSC '95	1722.6	ECSC '95 1827.3	ECSC '95 1817.0	
ECSC '95	1722.6	ECSC '95 1796.9	ECSC '95 1605.0	
IEA '94	1722.0	ECSC '95 1580.6	ECSC '95 1265.9	

Oil Production, OECD



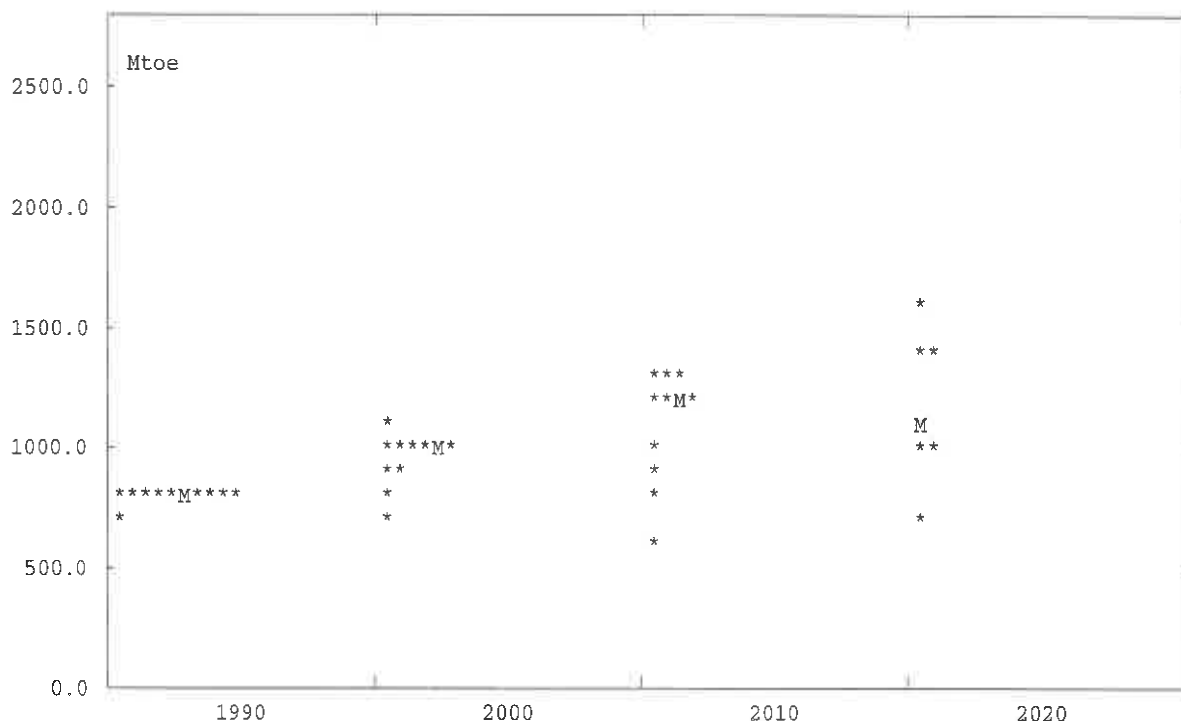
	1990	2000	2010	2020
Medians:	759.3	774.0	816.3	710.7
OWREF '95	903.9	1048.8	978.2	910.6
IEA '94	760.0	826.4	885.2	874.8
ECSC '95	759.3	818.7	873.3	842.3
ECSB '95	759.3	784.2	827.4	712.0
ECSA '95	759.3	774.0	816.3	709.4
LYNCH '94	743.3	765.5	708.9	660.0
ITREF '93	731.1	758.0	706.0	626.0
MERGE '95	730.8	734.4	678.0	489.5
CWREF '93	728.0	658.8	613.3	

Oil Imports - Exports, OECD



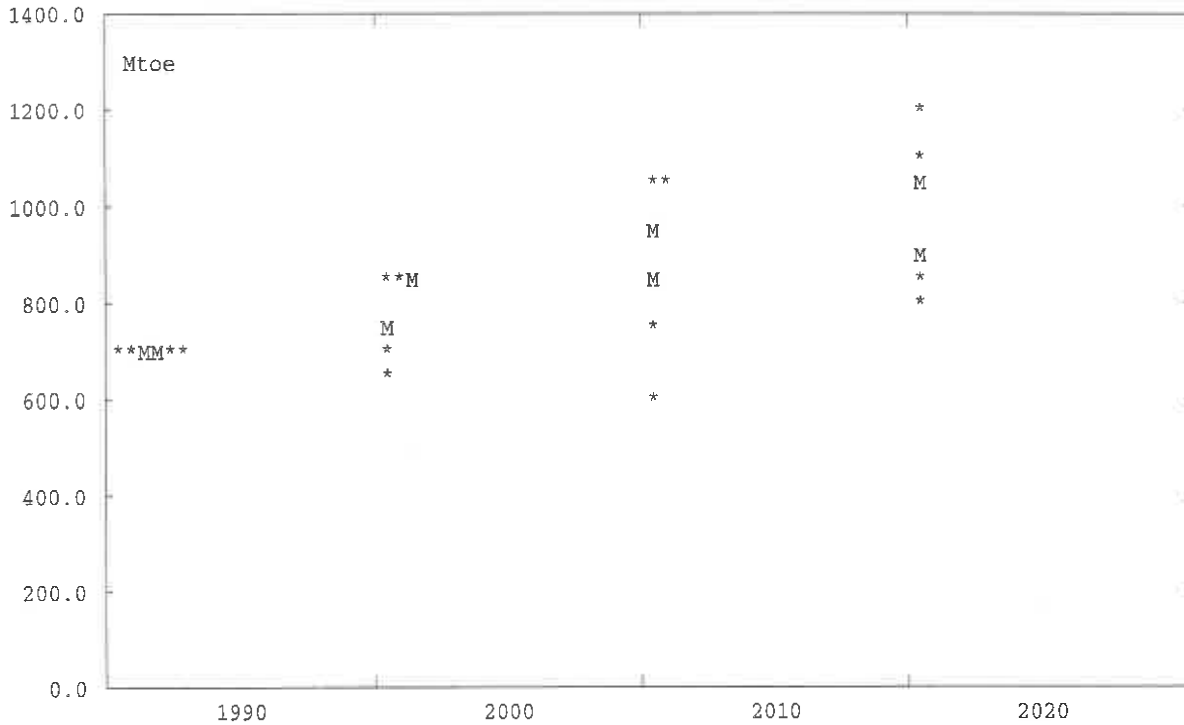
Medians:	1990	2000	2010	2020
CWREF'93	1041.0	1838.7	1807.7	2059.8
ECSB '95	1033.7	1466.8	1684.7	1568.2
ECSA '95	1033.7	1247.3	1461.5	1538.5
ECSC '95	1033.7	1167.0	1343.0	1292.9
MERGE'95	1021.7	1065.0	1172.9	1172.0
LYNCH'94	1009.2	1031.5	1158.0	882.6
ITREF'93	1001.1	1014.2	1000.7	750.5
OWREF'95	966.4	1008.6	896.1	478.8
IEA '94	962.0	846.2	652.6	

Natural Gas Consumption, OECD



Medians:	1990	2000	2010	2020
ITREF'93	822.5	1072.0	1284.2	1557.3
EIA '95	821.0	1034.2	1267.0	1408.8
OWREF'95	802.6	1034.0	1256.5	1406.2
ECSB '95	786.1	1027.0	1234.2	1137.8
ECSC '95	786.1	1014.2	1231.0	1047.9
ECSA '95	786.1	1008.0	1208.0	1001.1
IEA '94	786.0	964.0	1186.0	735.0
AMOCL'93	782.0	898.9	1034.8	
AMOCH'93	782.0	852.0	892.0	
CWREF'93	753.0	844.2	821.0	
MERGE'95	749.7	707.5	618.9	

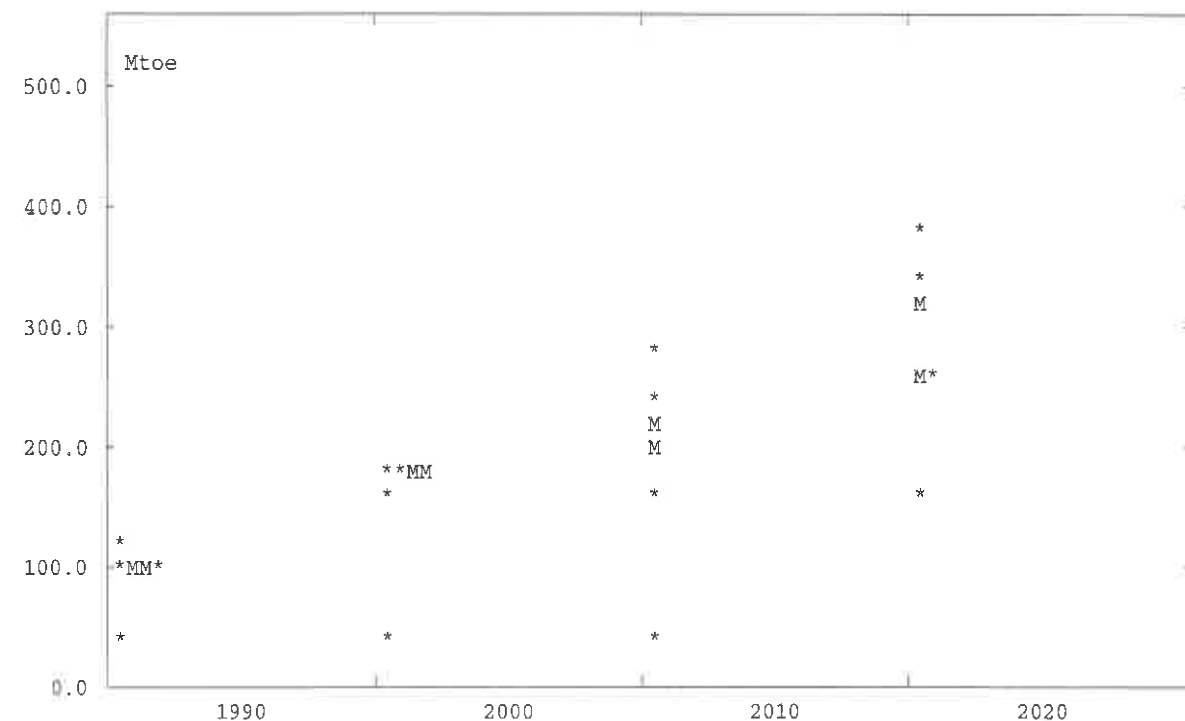
Natural Gas Production, OECD



Medians:	1990	2000	2010	2020
ITREF'93	719.1	850.9	1041.7	1216.6
MERGE'95	714.5	840.8	1031.2	1078.5
OWREF'95	703.5	833.8	959.0	1027.7
ECSE '95	688.5	728.7	843.4	887.6
ECSC '95	688.5	677.3	725.1	845.5
ECSA '95	688.5	672.3	583.7	794.0

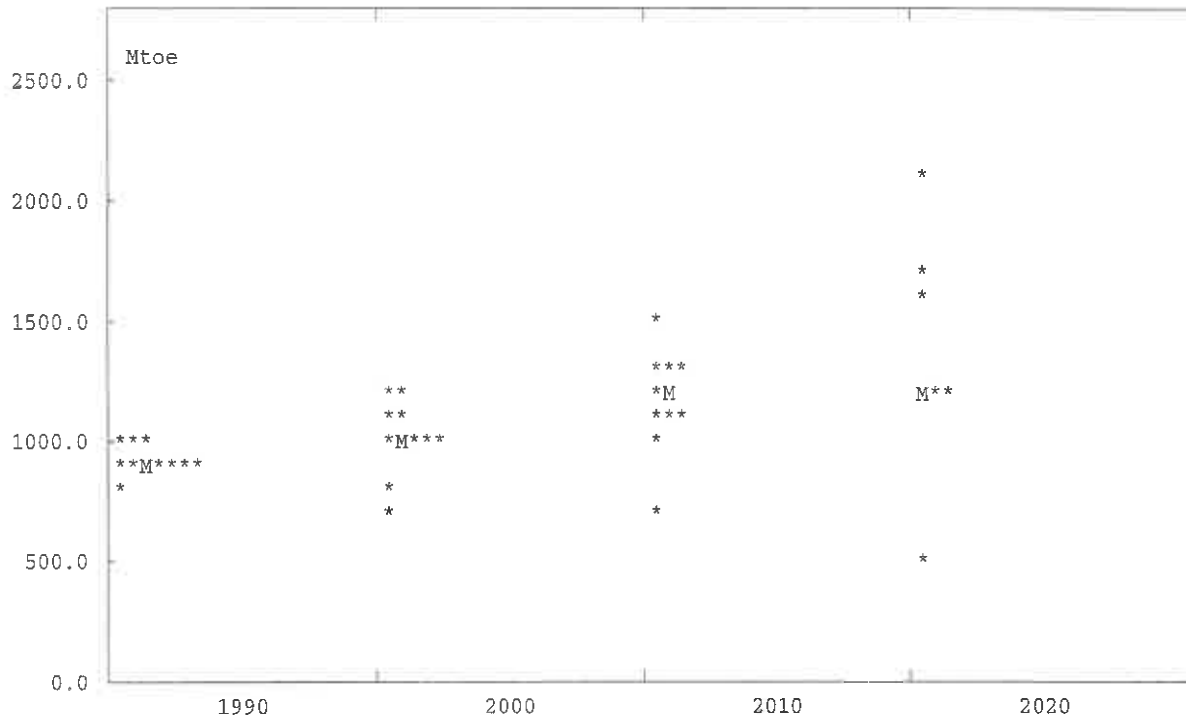


Natural Gas Imports - Exports, OECD



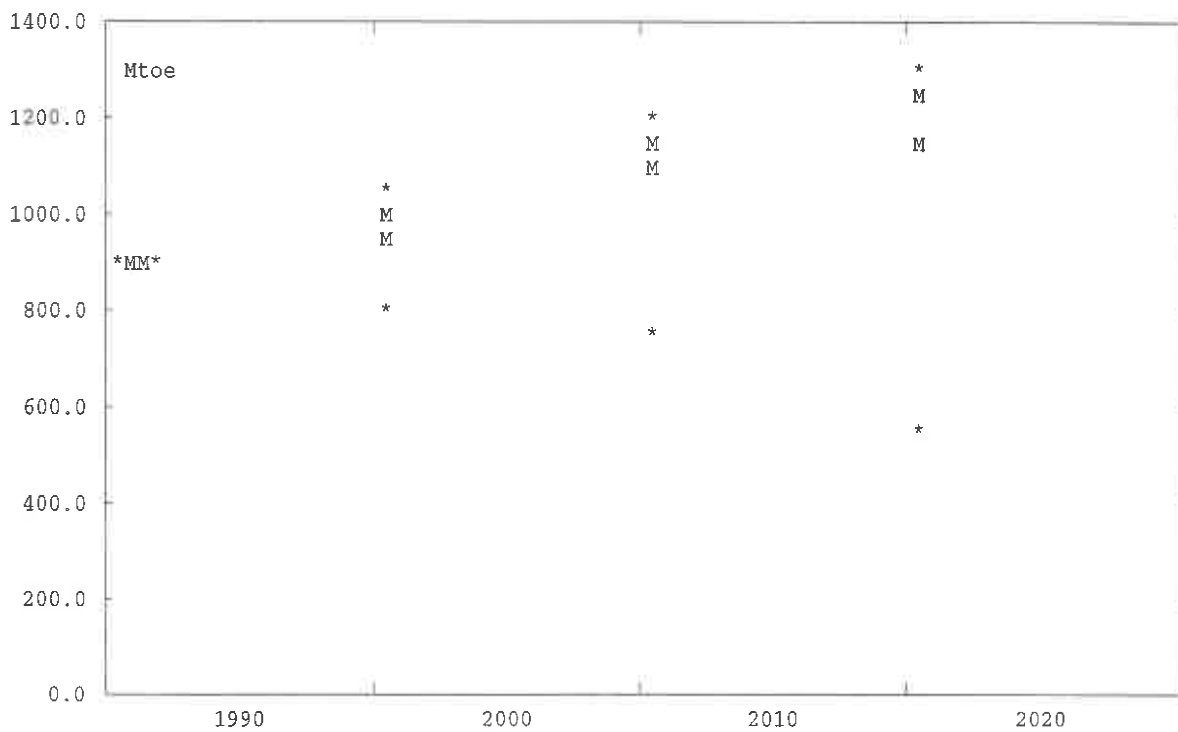
Medians:	1990	2000	2010	2020
OWREF'95	114.9	188.4	281.3	388.3
ITREF'93	103.4	174.2	242.5	340.7
ECSEB '95	97.7	173.4	225.3	327.7
ECSC '95	97.7	170.2	191.4	253.8
ECSA '95	97.7	166.9	166.9	250.2
MERGE'95	35.2	35.2	35.2	155.6

Coal Consumption, OECD



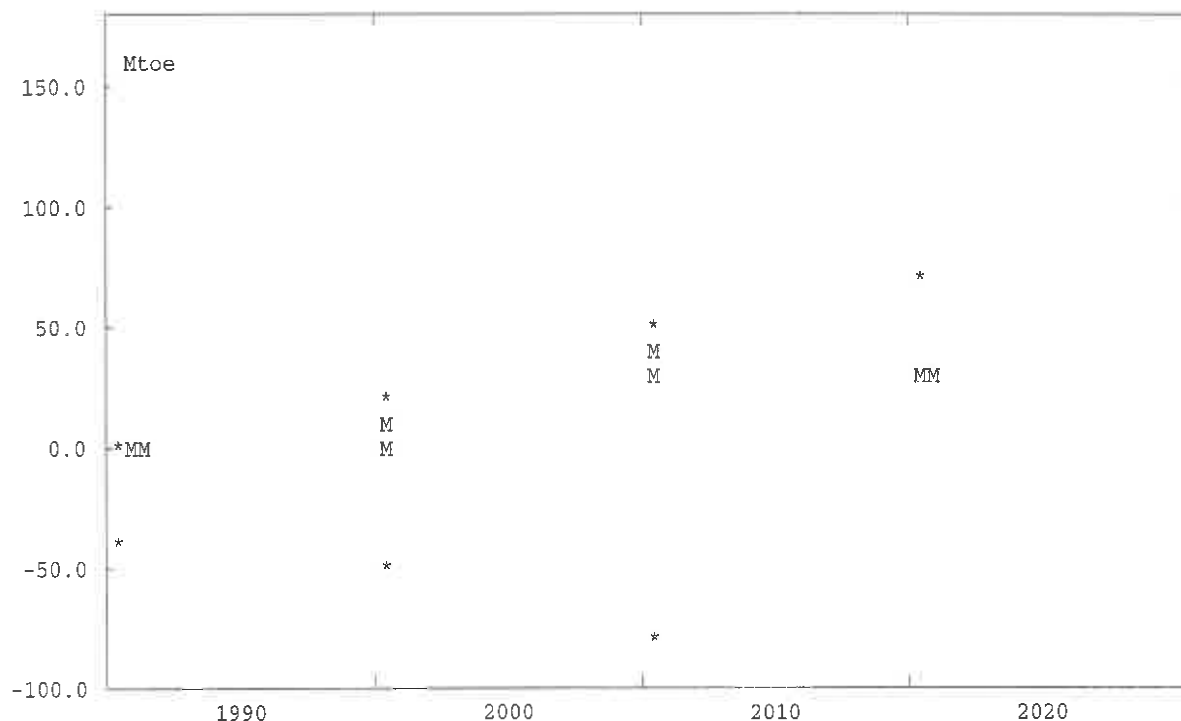
Medians:	1990		2000		2010		2020
AMOCL '93	1033.0	MERGE '95	1245.4	MERGE '95	1507.5	ITREF '93	2114.7
AMOCH '93	1033.0	AMOCH '93	1160.0	AMOCH '93	1342.0	MERGE '95	1744.3
IEA '94	1029.0	IEA '94	1131.0	ITREF '93	1327.5	CWREF '93	1576.0
OWREF '95	941.6	AMOCL '93	1113.0	IEA '94	1299.0	ECSB '95	1244.8
MERGE '95	926.4	OWREF '95	1033.5	CWREF '93	1249.0	ECSA '95	1198.1
ITREF '93	914.6	ECSA '95	1033.4	AMOCL '93	1169.0	OWREF '95	1164.5
ECSC '95	907.5	CWREF '93	1004.0	ECSA '95	1144.3	ECSC '95	541.7
ECSA '95	907.5	ECSB '95	964.4	OWREF '95	1119.1		
ECSB '95	907.5	EIA '95	952.0	ECSB '95	1107.4		
EIA '95	882.0	ECSC '95	762.9	EIA '95	1034.0		
CWREF '93	842.0	ITREF '93	711.6	ECSC '95	682.9		

Coal Production, OECD



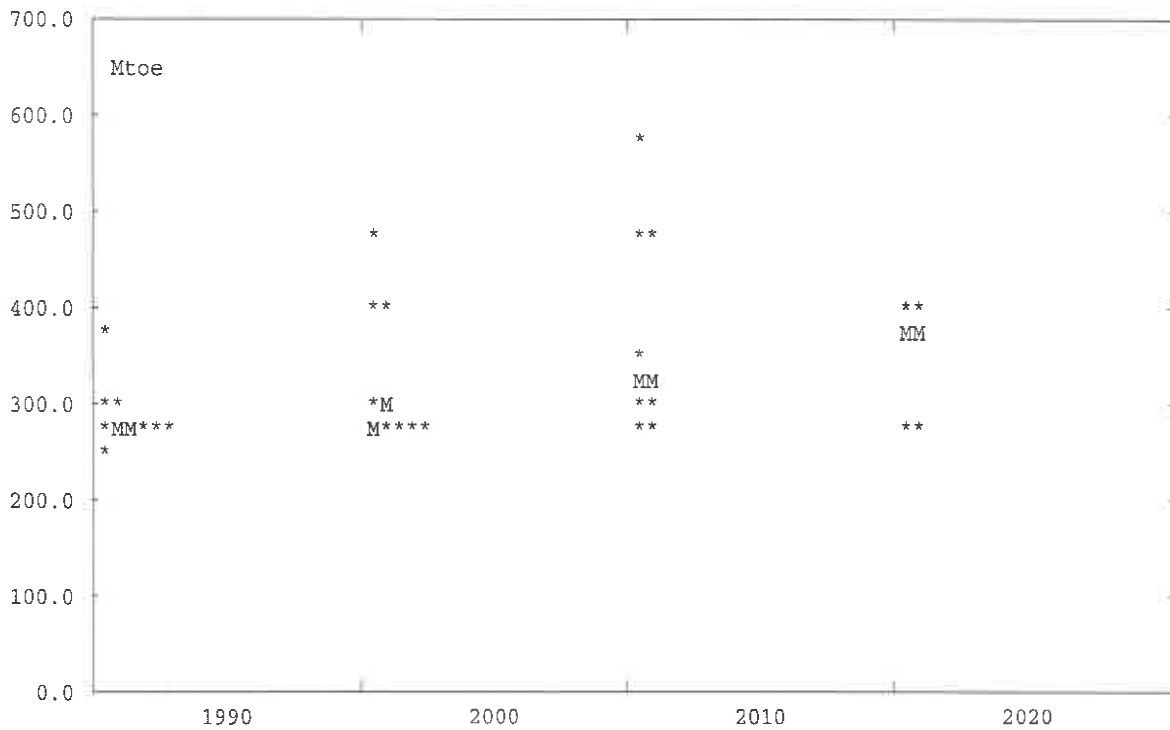
Medians:	1990	2000	2010	2020
OWREF '95	919.8	1047.1	1177.3	1317.5
ECSB '95	907.6	993.5	1144.4	1230.1
ECSC '95	907.6	969.4	1094.8	1173.3
ECSA '95	907.6	778.2	732.4	574.2

Coal Exports - Imports, OECD



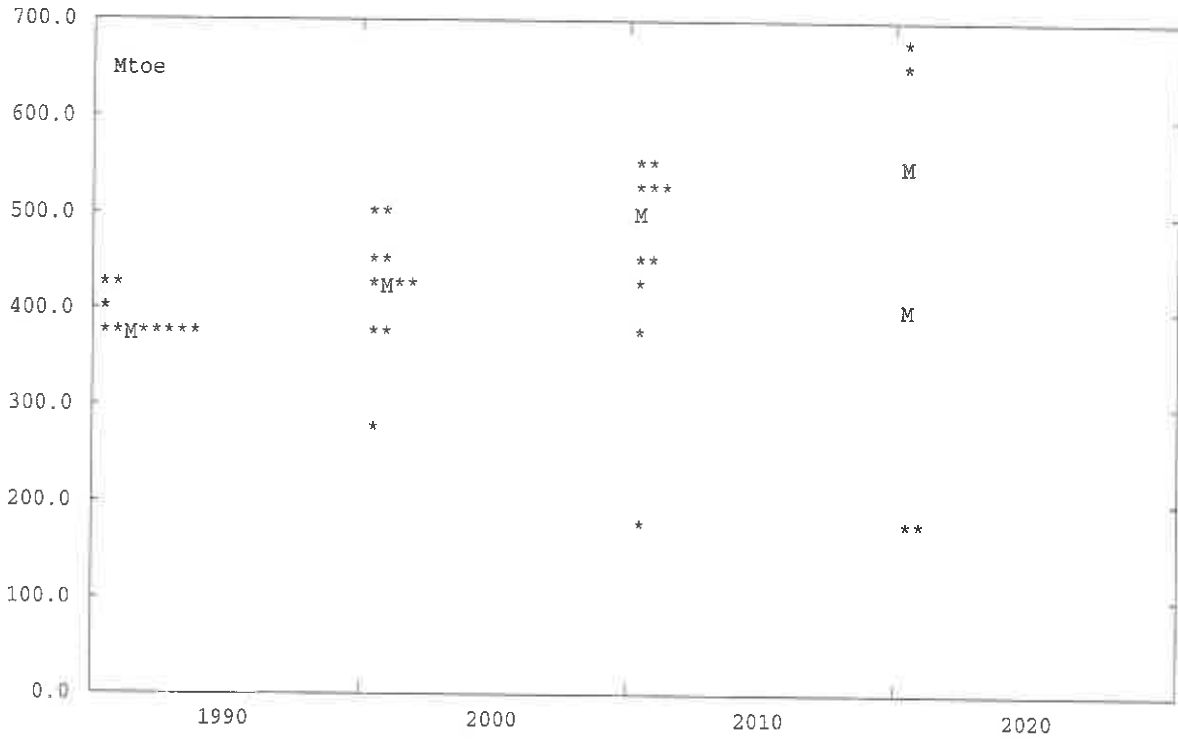
Medians:	1990	2000	2010	2020
ECSA '95	0.1	15.3	49.5	72.8
ECSB '95	0.1	13.7	37.0	32.6
ECSC '95	0.1	5.0	33.0	32.0
OWREF '95	-42.8	-54.6	-75.4	-106.6

Renewables, Electric, OECD



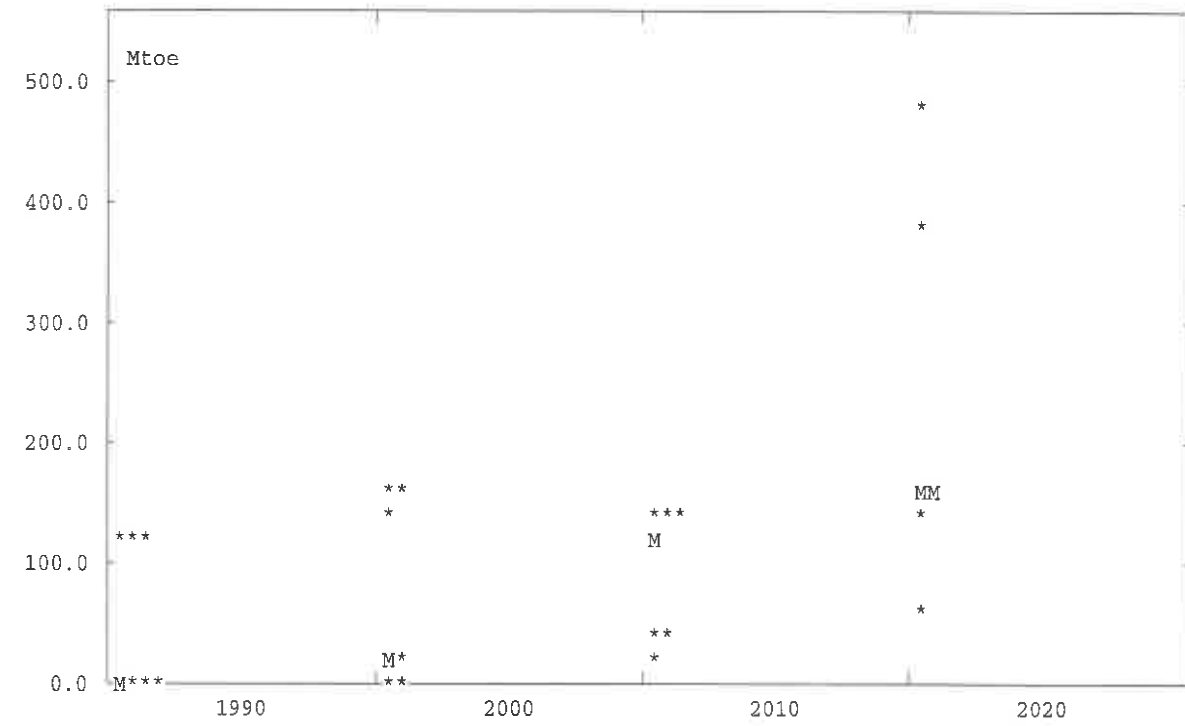
Medians:	1990	2000	2010	2020
EIA '95	369.0	466.0	564.0	403.0
AMOCL'93	310.0	399.0	481.0	400.4
AMOCH'93	310.0	398.0	475.0	385.1
ECSCB '95	287.4	312.0	356.0	373.3
ECSC '95	287.4	306.0	331.0	278.6
ECSCA '95	287.4	280.5	319.3	265.4
ITREF'93	278.6	278.6	310.4	
CWREF'93	269.0	275.4	305.8	
MERGE'95	265.4	270.9	278.6	
IEA '94	253.0	265.4	265.4	

Nuclear Energy, OECD



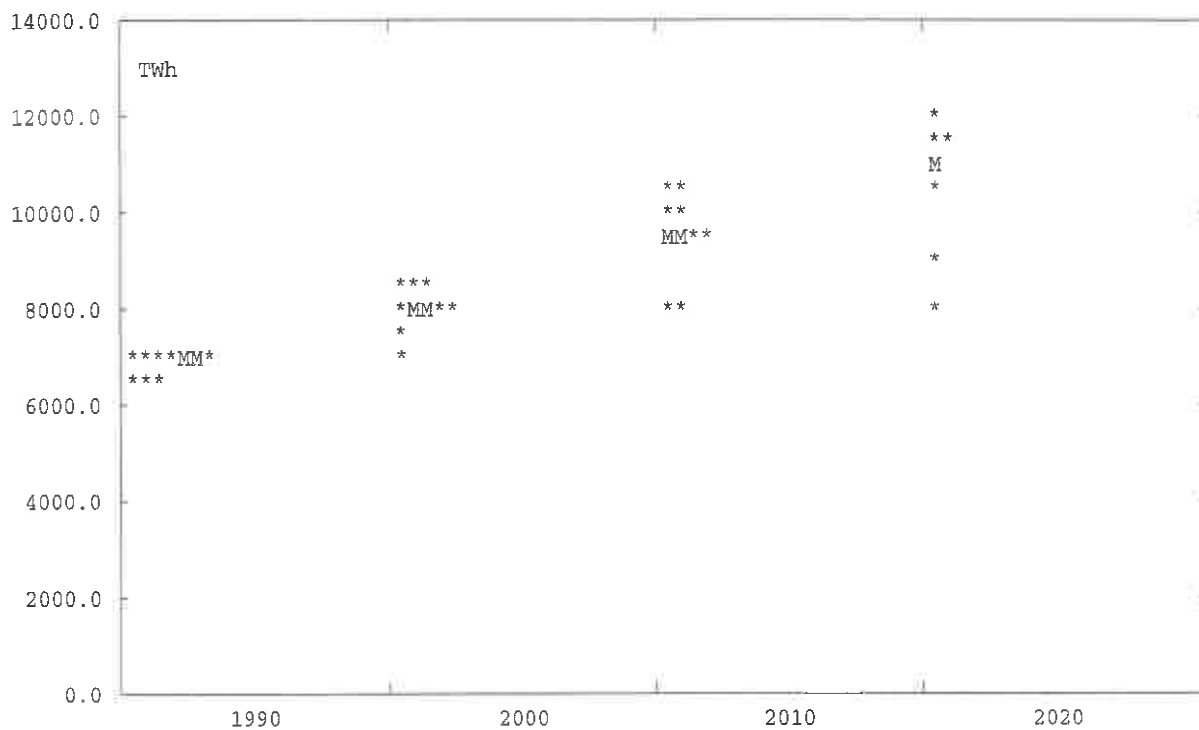
	1990	2000	2010	2020
Medians:	372.0	422.9	490.2	480.6
AMOCL'93	425.0	502.0	544.0	676.7
AMOCH'93	425.0	497.0	539.0	658.9
NEA '94	412.0	457.0	535.8	550.1
EIA '95	381.0	442.0	527.0	411.0
MERGE'95	374.3	425.0	518.0	187.4
CWREF'93	372.0	422.9	490.2	170.1
ITREF'93	367.3	422.9	444.0	
ECSC '95	364.6	422.8	440.0	
ECSC '95	364.6	383.0	421.0	
ECSC '95	364.6	374.3	374.3	
IEA '94	364.0	275.6	183.9	

Renewables, Nonelectric, OECD



Medians:	1990	2000	2010	2020
ECSB '95	111.8	159.7	142.5	470.0
ECSC '95	111.8	152.4	141.5	387.8
ECSA '95	111.8	135.9	134.3	151.9
IEA '94	6.0	18.0	114.0	151.3
CWREF '93	0.0	12.0	47.0	145.7
MERGE '95	0.0	0.0	31.0	66.1
ITREF '93	0.0	0.0	10.5	

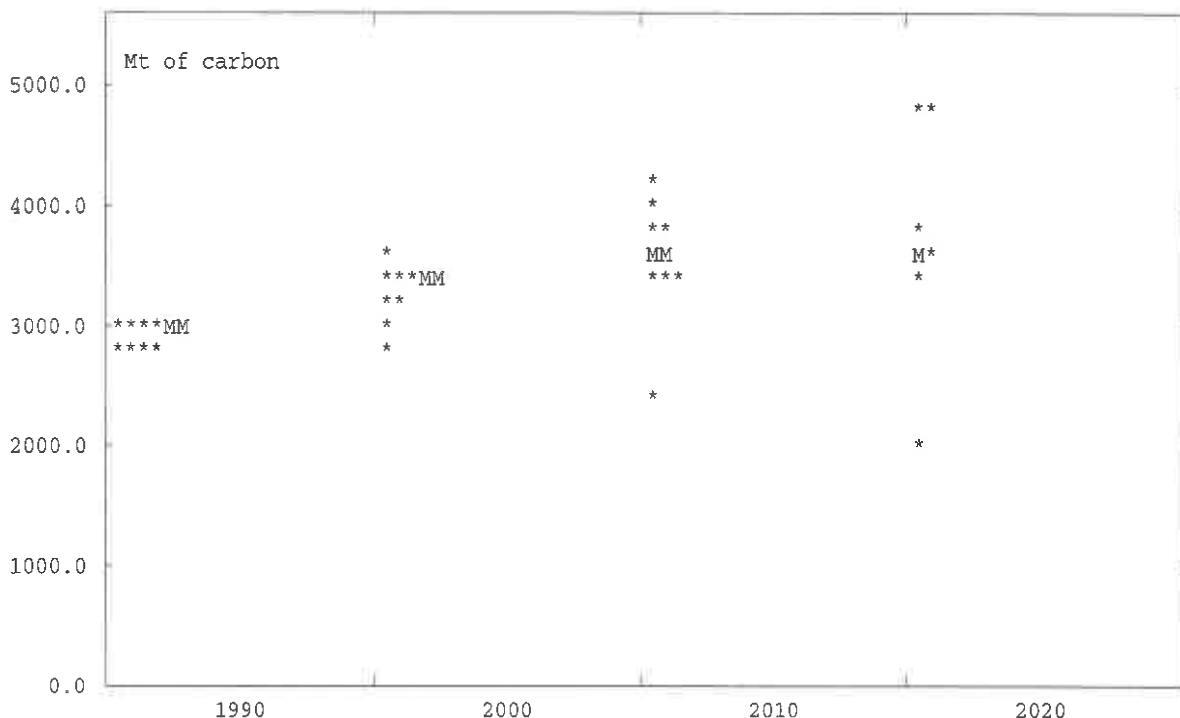
Electricity Generation, OECD



Medians:	1990	2000	2010	2020
IEA '94	7079.0	8620.0	10674.0	11811.3
ECSB '95	7024.4	8547.0	10600.0	11537.2
ECSC '95	7024.4	8388.7	10017.4	11327.6
ECSA '95	7024.4	8180.0	9750.0	10993.1
AMOCL'93	6851.0	8120.1	9551.3	10335.0
AMOCH'93	6851.0	8102.8	9420.2	9157.0
MERGE'95	6814.0	8085.3	9333.6	8184.5
CWREF'93	6652.0	7795.8	9316.3	
OWREF'95	6475.6	7468.2	7791.0	
ITREF'93	6439.0	6955.0	7773.8	

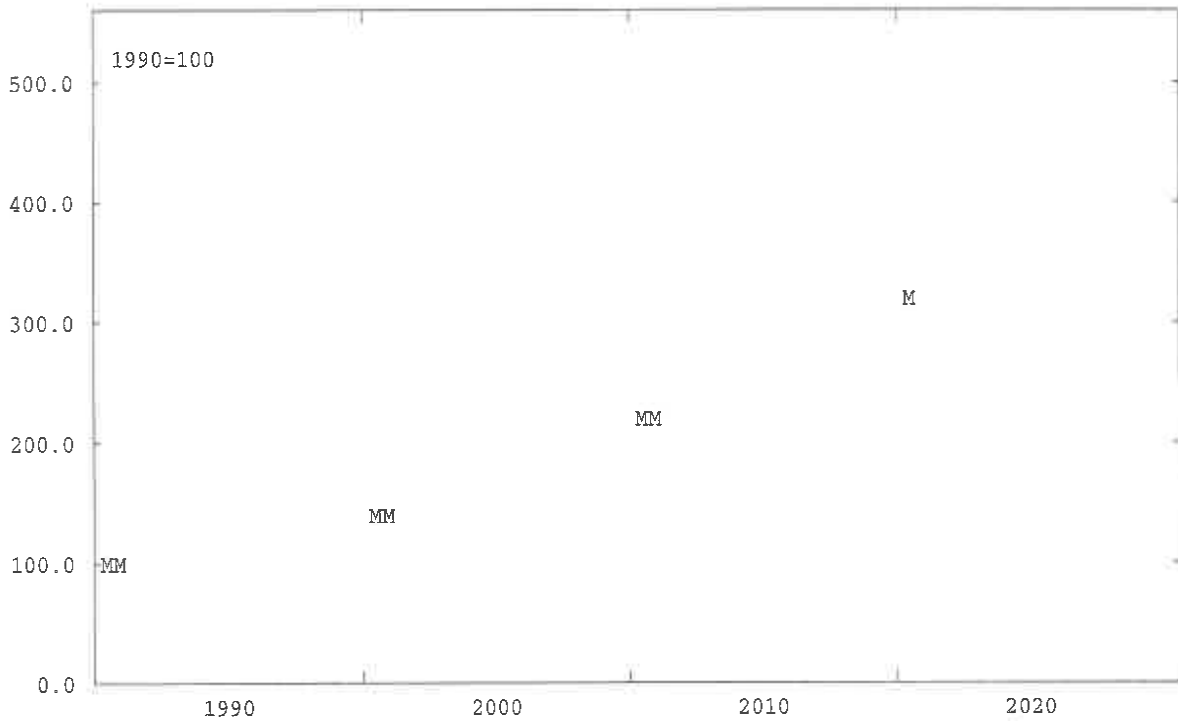


Carbon Emissions, OECD



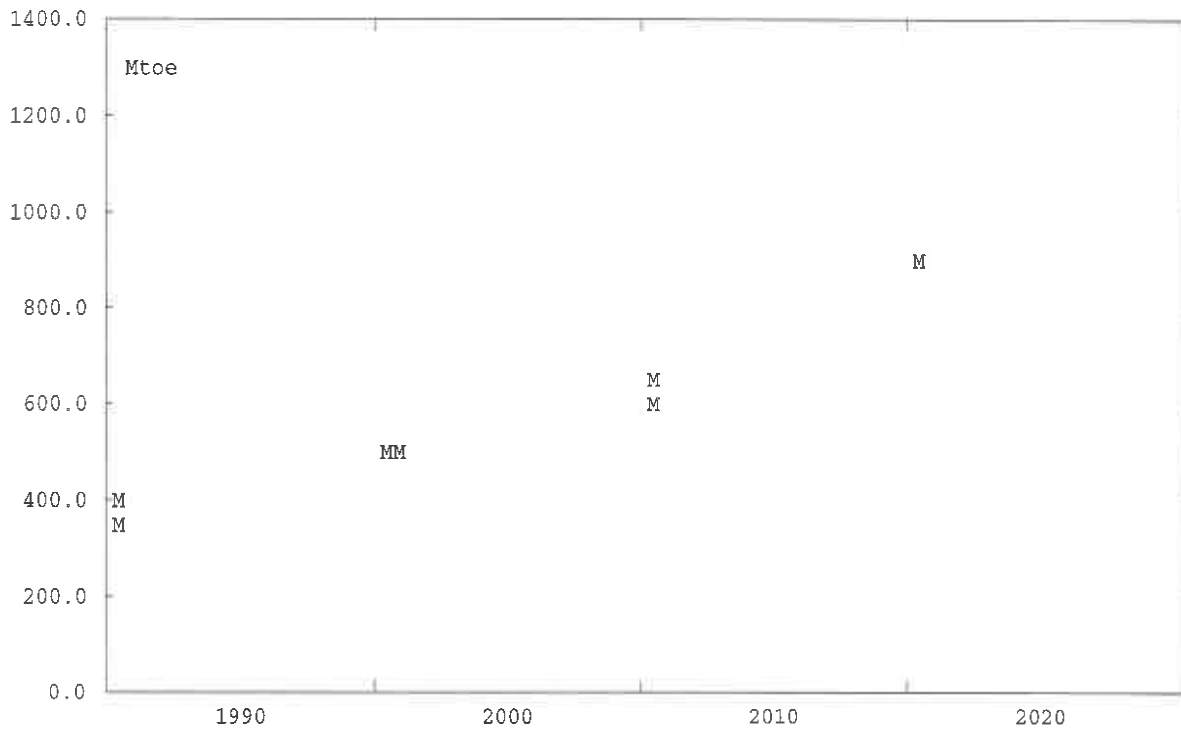
Medians:	1990	2000	2010	2020
OWREF '95	2983.9	3521.1	4191.5	4750.1
EIA '95	2954.0	3492.8	4087.1	4736.6
AMOCL '93	2912.0	3427.0	3848.0	3868.9
AMOCH '93	2912.0	3393.6	3748.0	3689.5
MERGE '95	2902.0	3380.0	3688.5	3603.0
ITREF '93	2901.0	3320.2	3584.5	3451.3
ECSA '95	2807.7	3245.0	3414.0	2084.9
CWREF '93	2805.0	3213.4	3368.0	
ECSB '95	2801.2	3089.0	3347.0	
ECSC '95	2797.4	2739.3	2463.4	

Real GNP (or GDP), OPEC



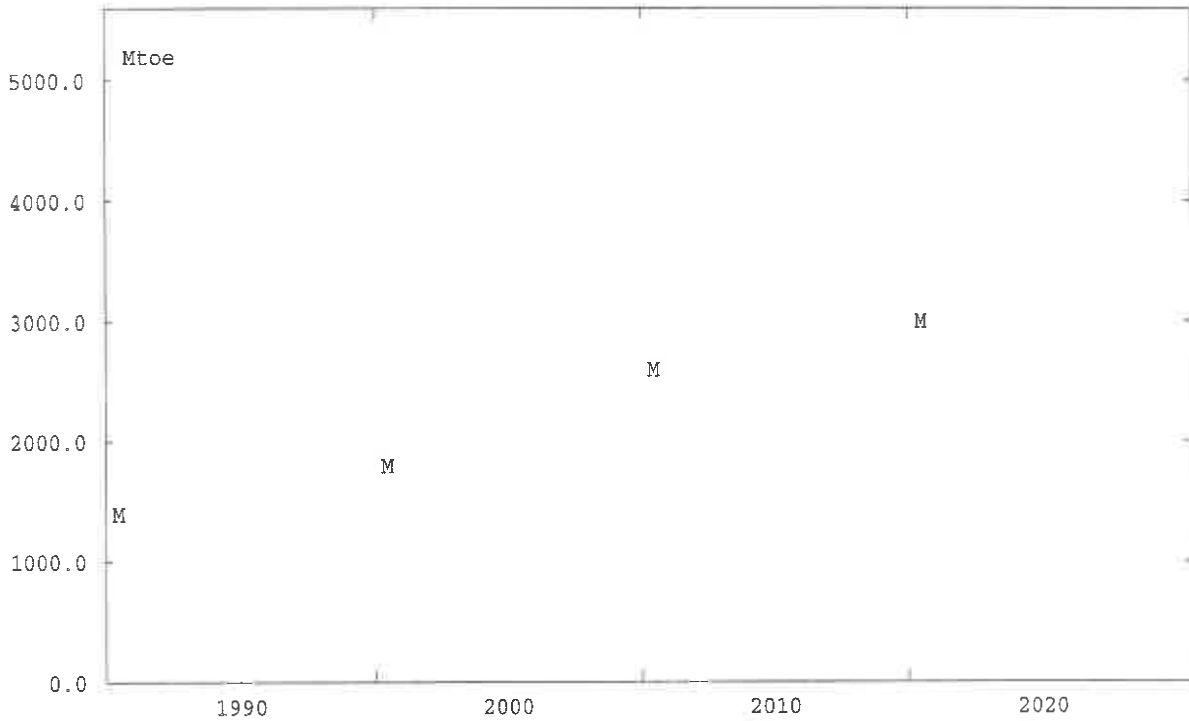
Medians:	1990	100.0	2000	147.2	2010	218.2	2020	322.9
EIA '95	100.0	OWREF'95	147.4	OWREF'95	218.5	OWREF'95	322.9	
OWREF'95	100.0	EIA '95	147.0	EIA '95	218.0			

Total PE Consumption, OPEC



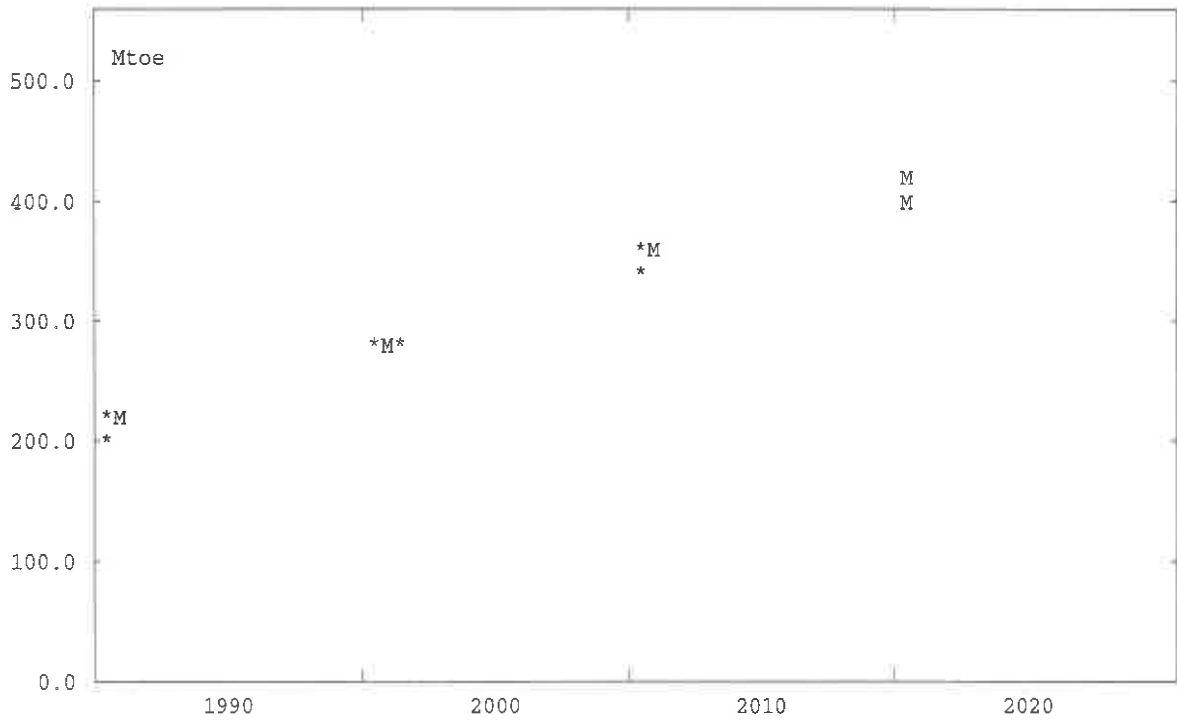
Medians:	371.0	497.7	640.3	896.4
EIA '95	383.0	501.3	664.7	896.4
OWREF '95	359.0	494.0	616.0	

Total PE Production, OPEC



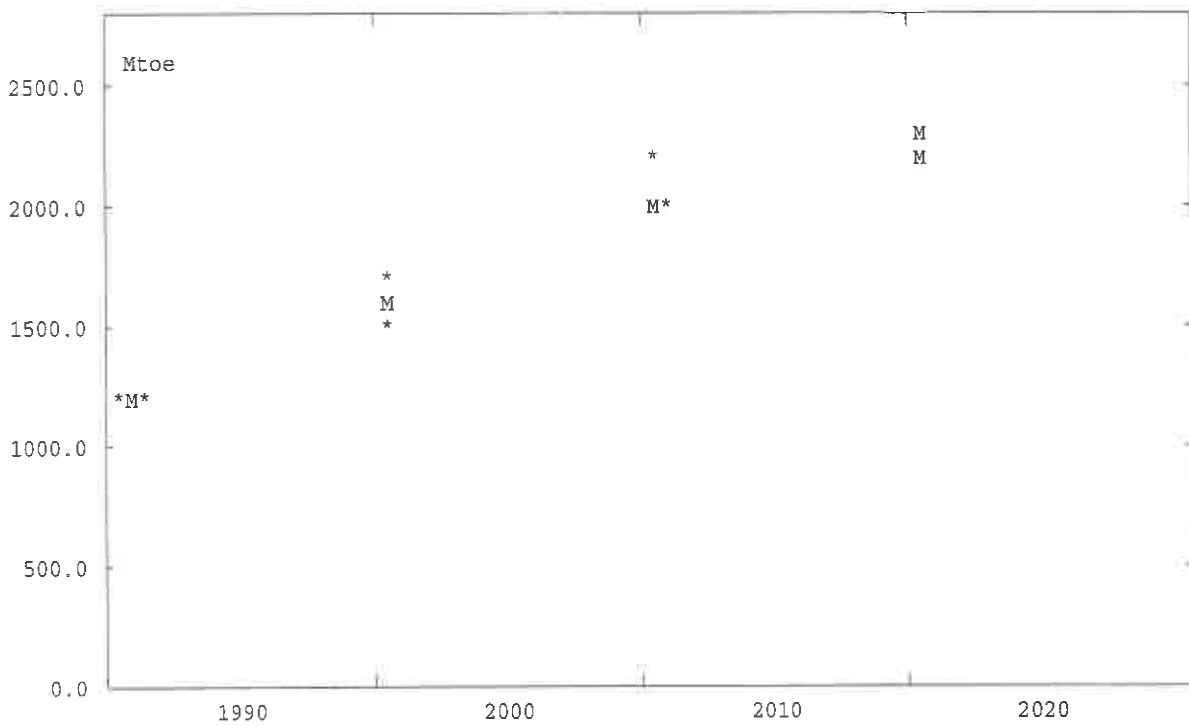
Medians:	1444.0	1855.7	2511.4	3033.8
OWREF'95	1444.0 OWREF'95	1855.7 OWREF'95	2511.4 OWREF'95	3033.8

Oil Consumption, OPEC



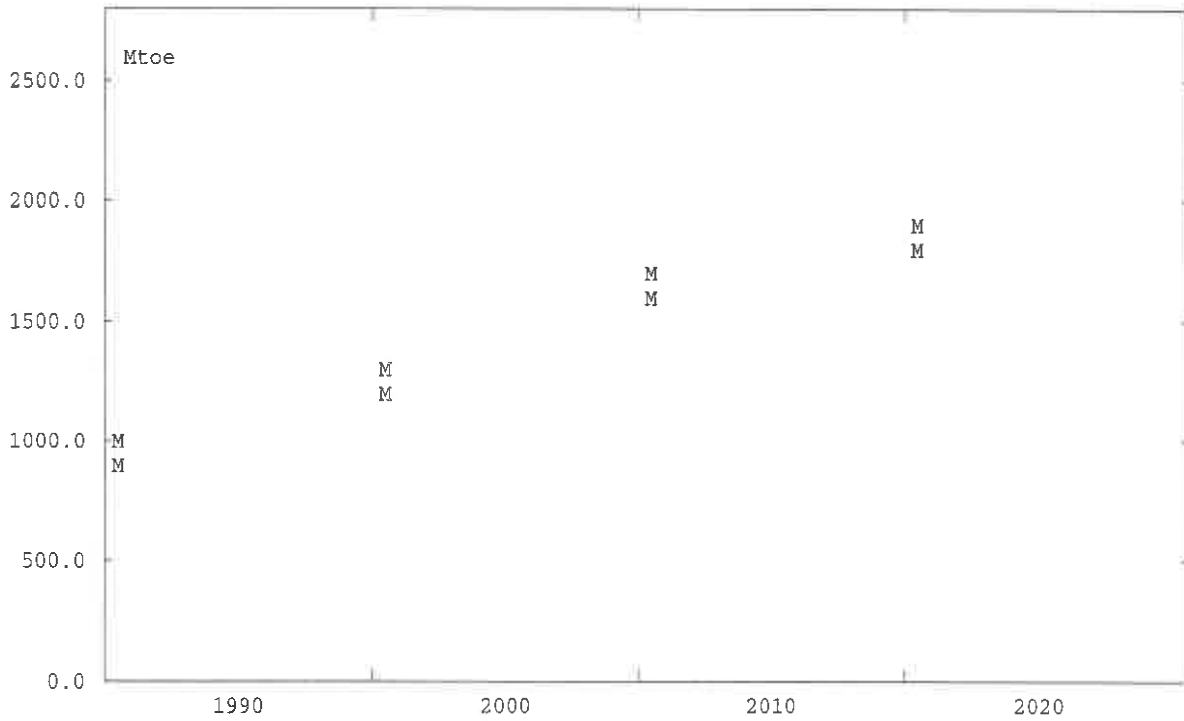
Medians:	215.0	284.3	352.3	419.3			
EIA '95	226.0	EIA '95	289.0	EIA '95	353.0	LYNCH'94	429.5
LYNCH'94	215.0	OWREF'95	284.3	LYNCH'94	352.3	OWREF'95	409.1
OWREF'95	204.2	LYNCH'94	275.0	OWREF'95	346.0		

Oil Production, OPEC



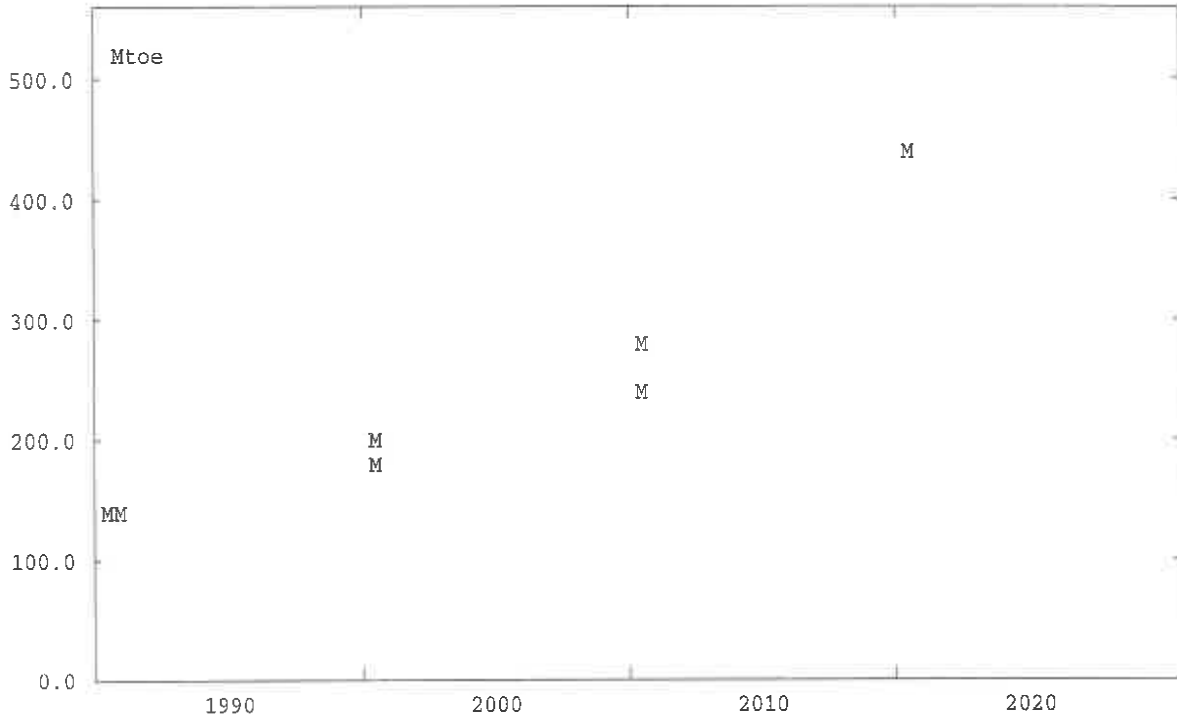
Medians:	1203.0	1591.9	2007.9	2257.7			
OWREF '95	1231.4	EIA '95	1672.0	EIA '95	2220.0	LYNCH '94	2288.9
EIA '95	1203.0	LYNCH '94	1591.9	LYNCH '94	2007.9	OWREF '95	2226.5
LYNCH '94	1158.6	OWREF '95	1507.3	OWREF '95	1959.6		

Oil Exports - Imports, OPEC



Medians:	974.4	1270.0	1634.6	1838.4
OWREF'95	1005.2	1316.9	1655.6	1859.4
LYNCH'94	943.6	1223.1	1613.5	1817.4

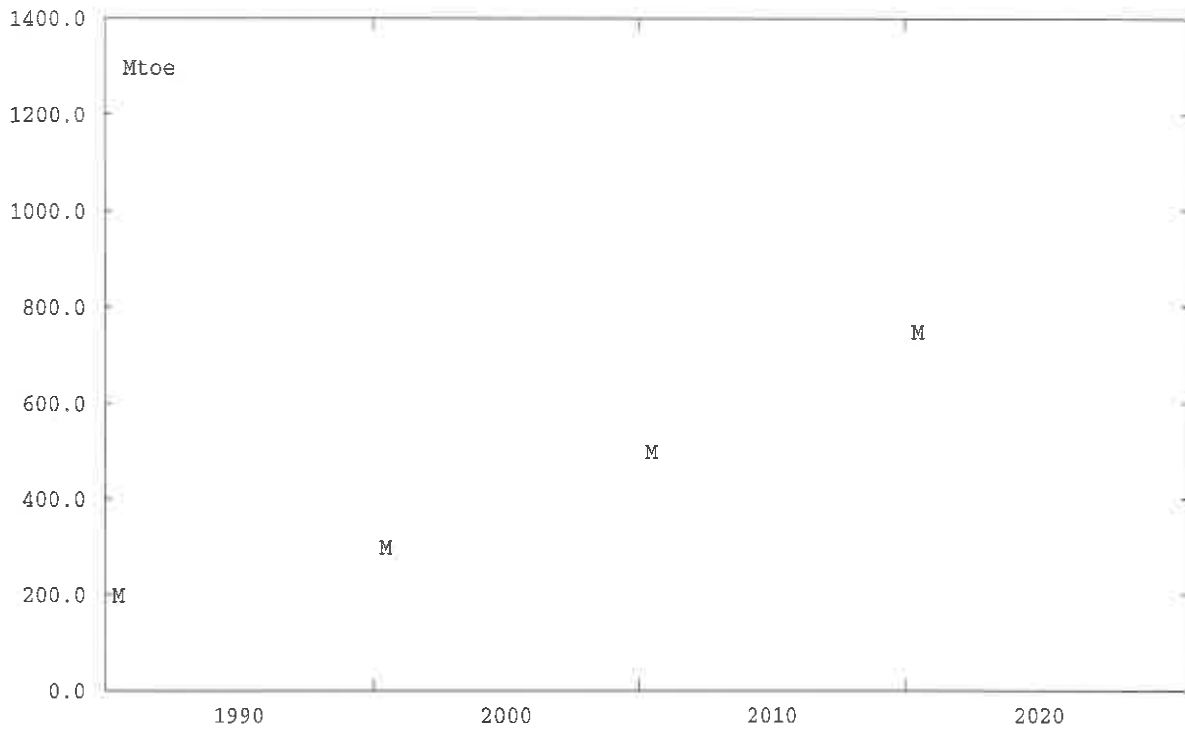
Natural Gas Consumption, OPEC



Medians:	141.7	186.9	257.9	444.0
OWREF'95	144.3	192.9	285.9	444.0
EIA '95	139.0	181.0	230.0	

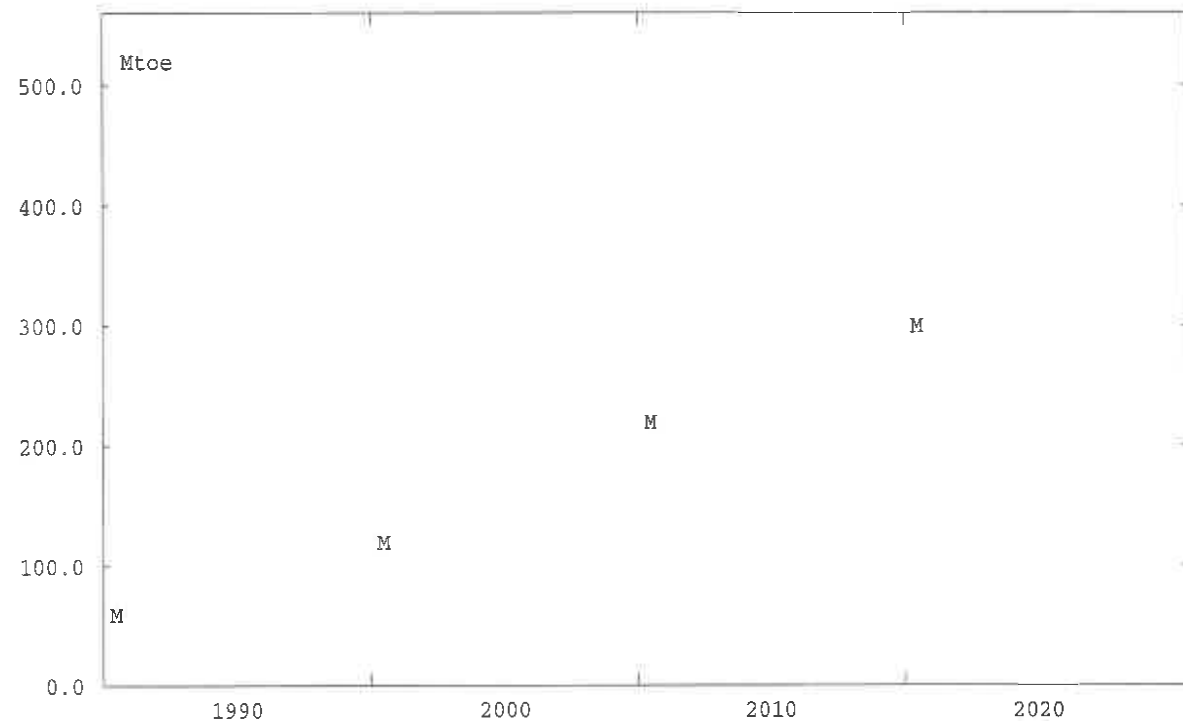


Natural Gas Production, OPEC



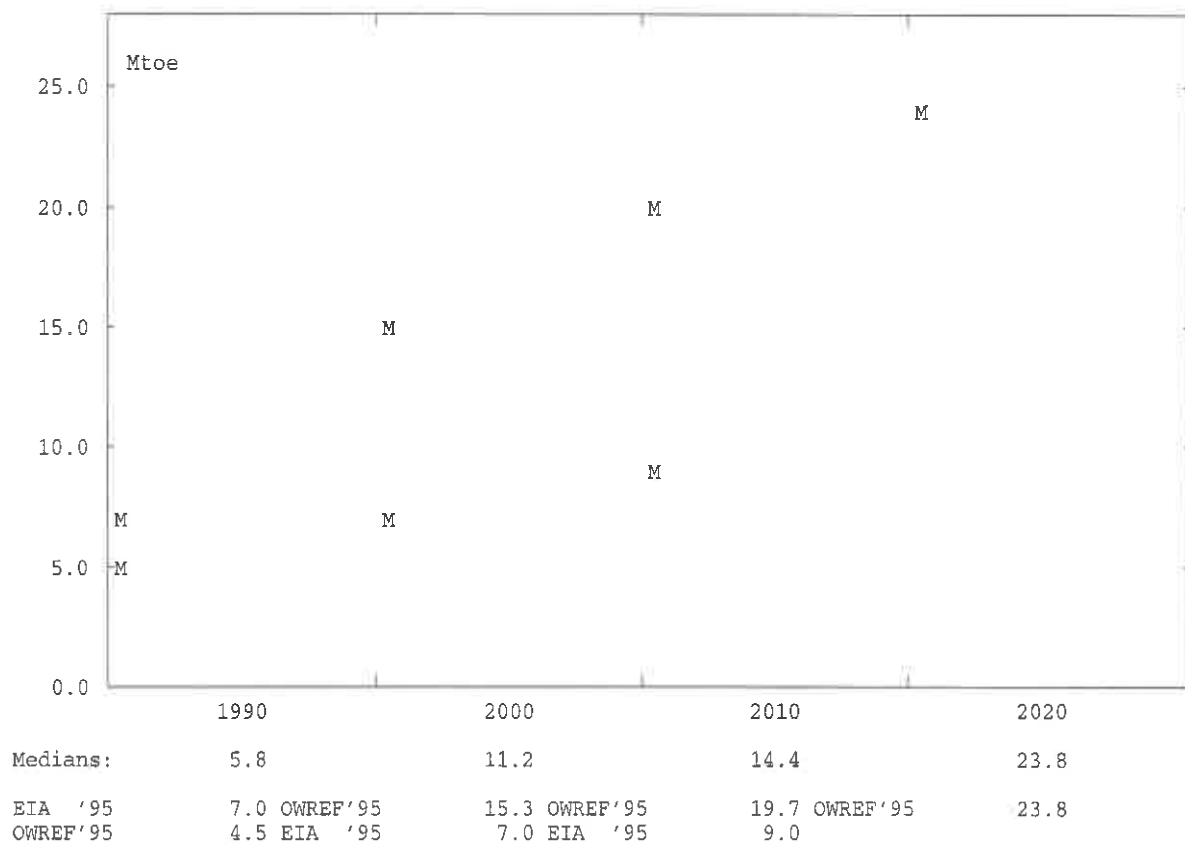
Medians:	199.0	312.1	503.6	745.5
OWREF'95	199.0	312.1	503.6	745.5

Natural Gas Exports - Imports, OPEC

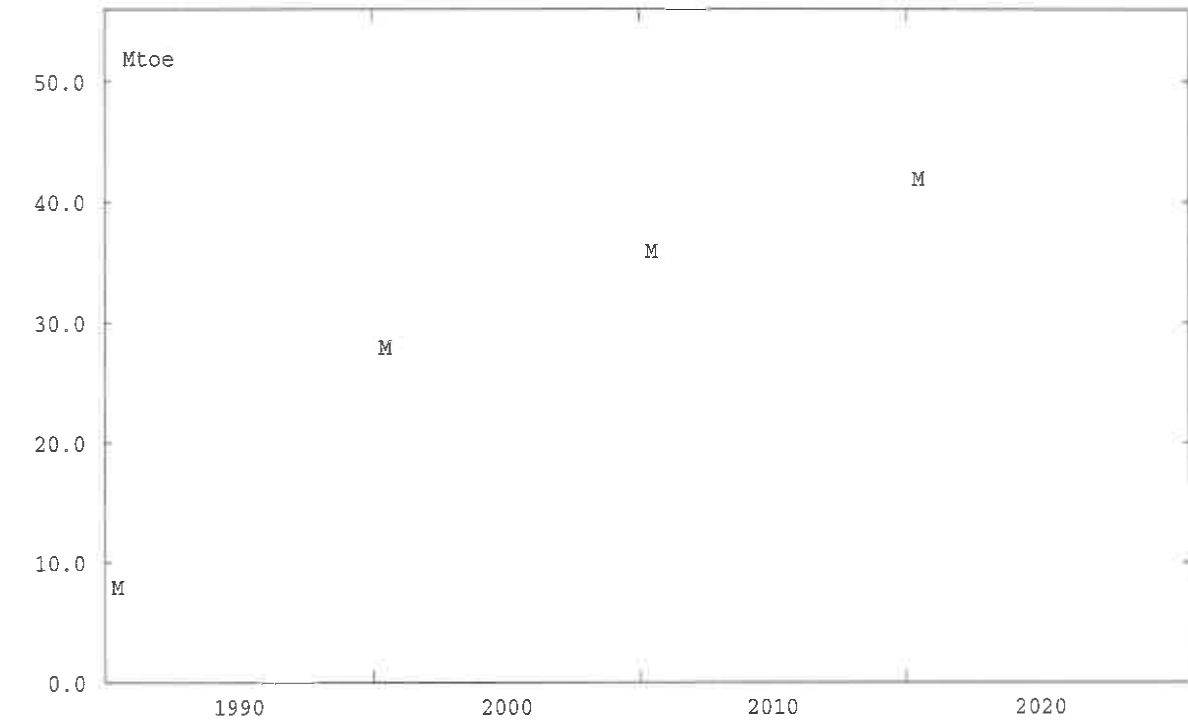


Medians:	54.6	115.8	212.7	293.5
OWREF'95	54.6 OWREF'95	115.8 OWREF'95	212.7 OWREF'95	293.5

Coal Consumption, OPEC

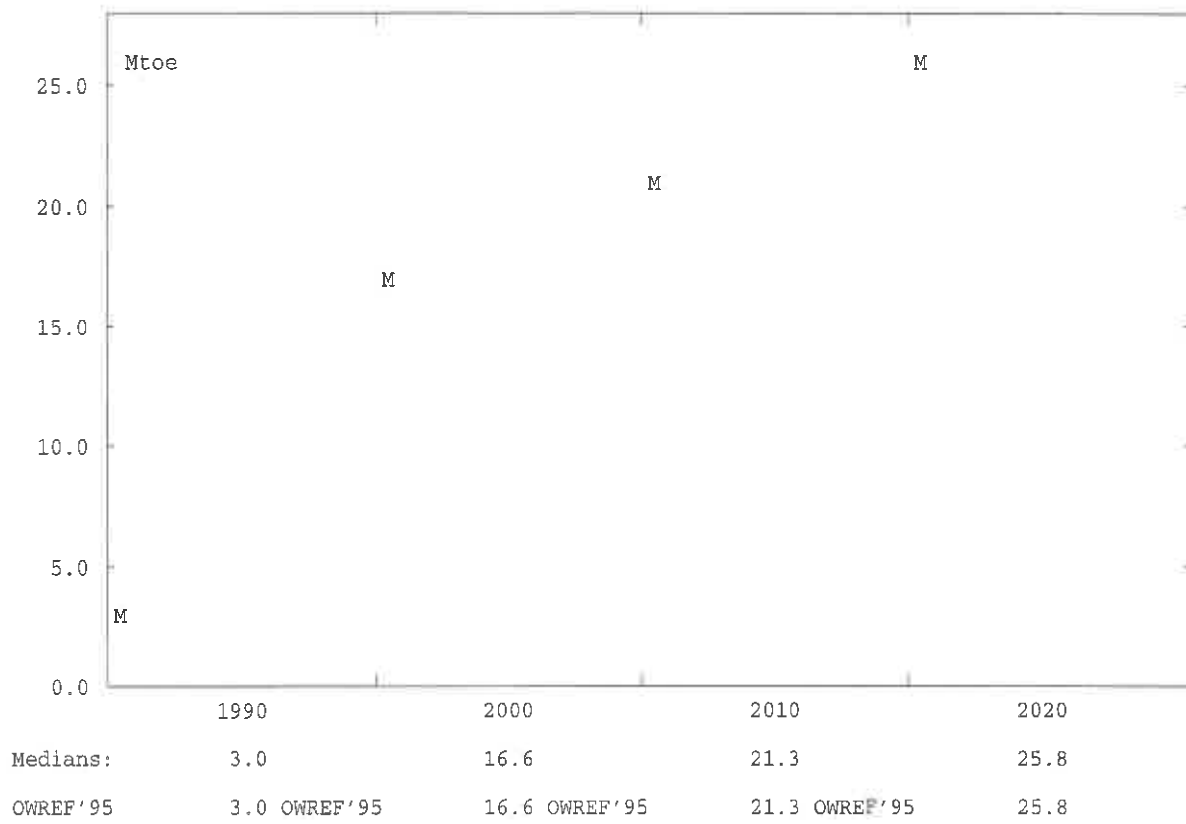


Coal Production, OPEC

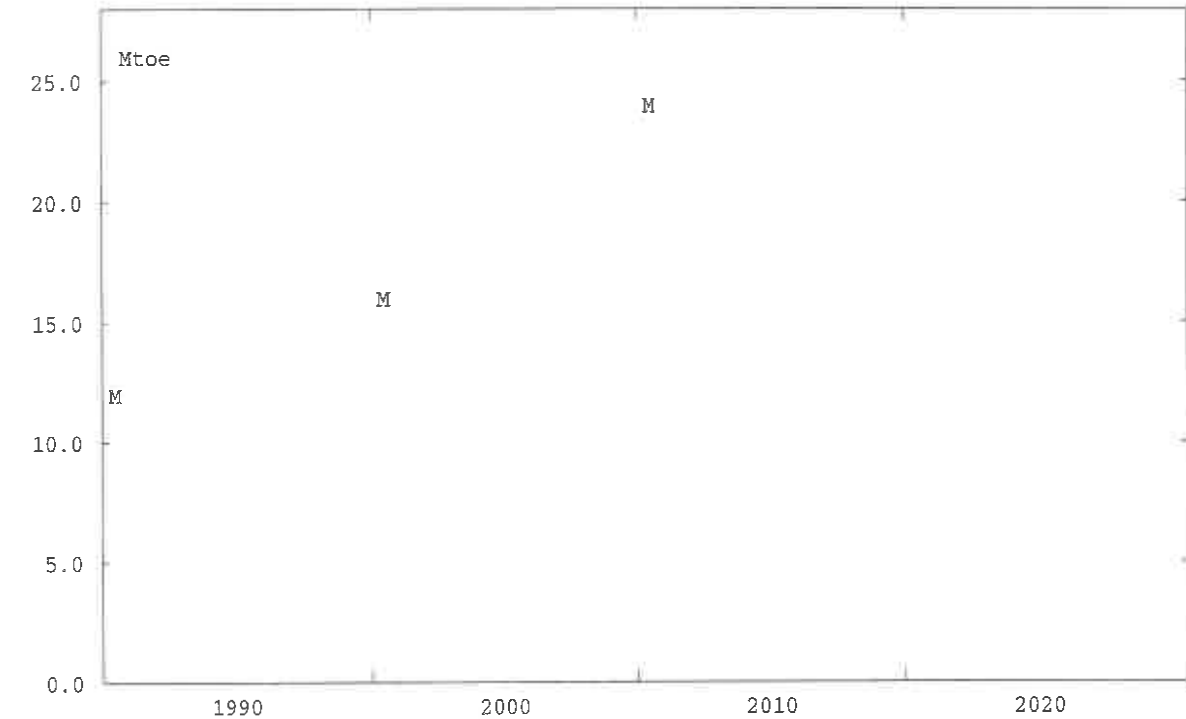


Medians:	7.6	27.3	35.2	42.5
OWREF'95	7.6 OWREF'95	27.3 OWREF'95	35.2 OWREF'95	42.5

Coal Exports - Imports, OPEC

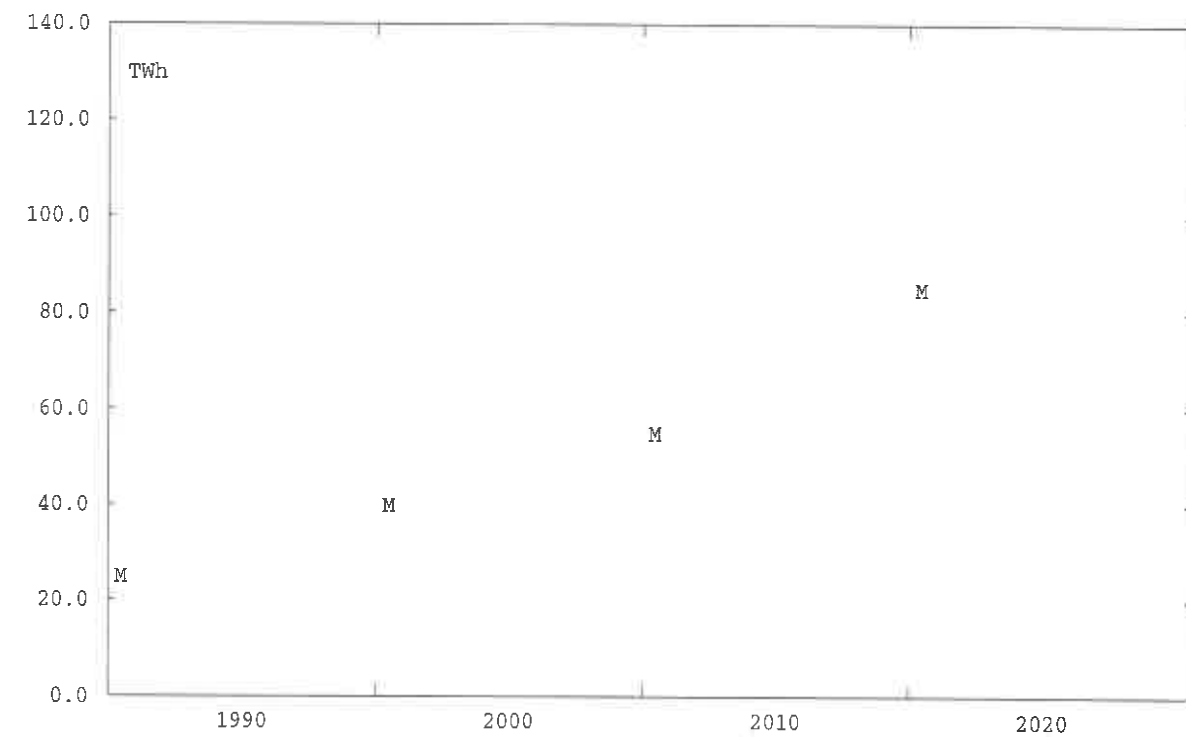


Renewables, Electric, OPEC



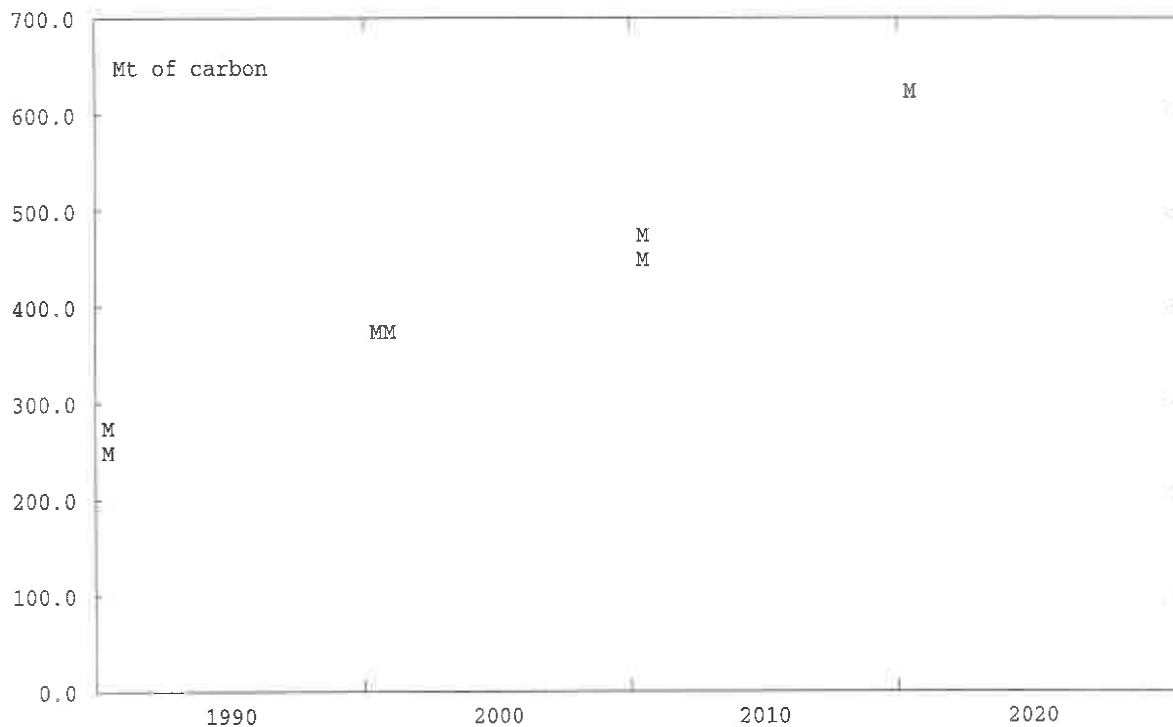
Medians:	12.0	16.0	24.0
EIA '95	12.0	16.0	24.0

Electricity Generation, OPEC



Medians:	25.8	38.4	56.9	84.2
OWREF '95	25.8 OWREF '95	38.4 OWREF '95	56.9 OWREF '95	84.2

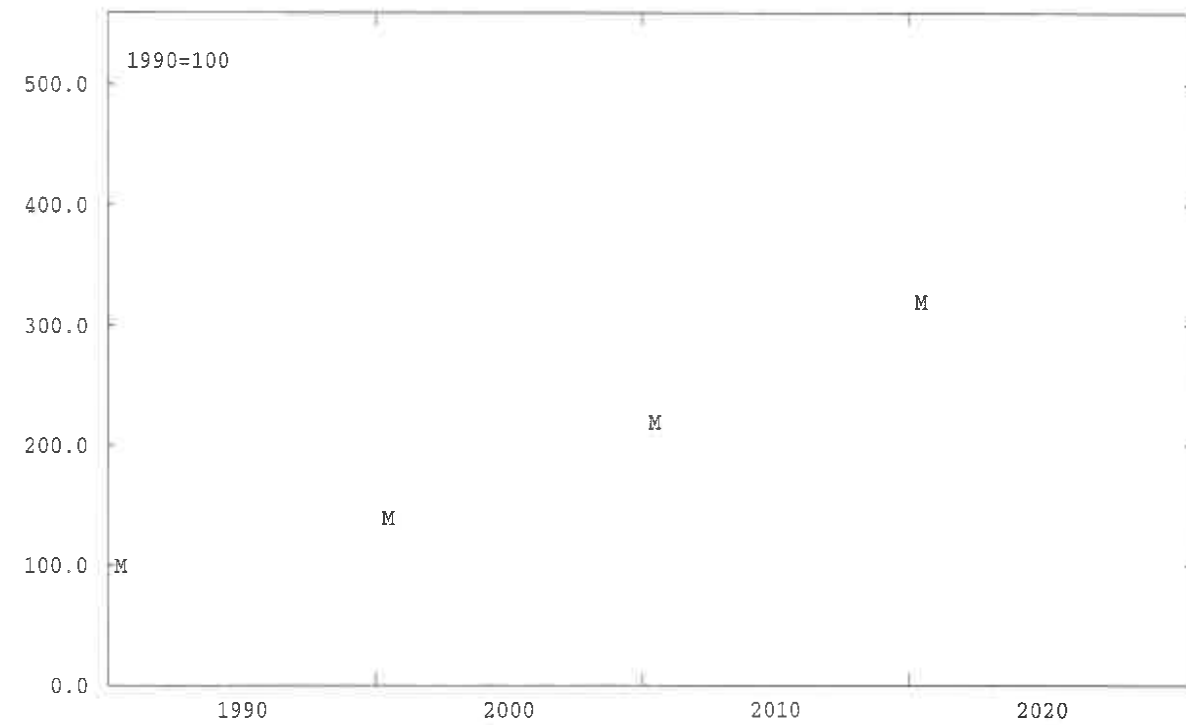
Carbon Emissions, OPEC



Medians:	273.0	367.3	467.7	633.8			
EIA '95	286.0	EIA '95	368.0	OWREF'95	479.5	OWREF'95	633.8
OWREF'95	260.0	OWREF'95	366.7	EIA '95	456.0		

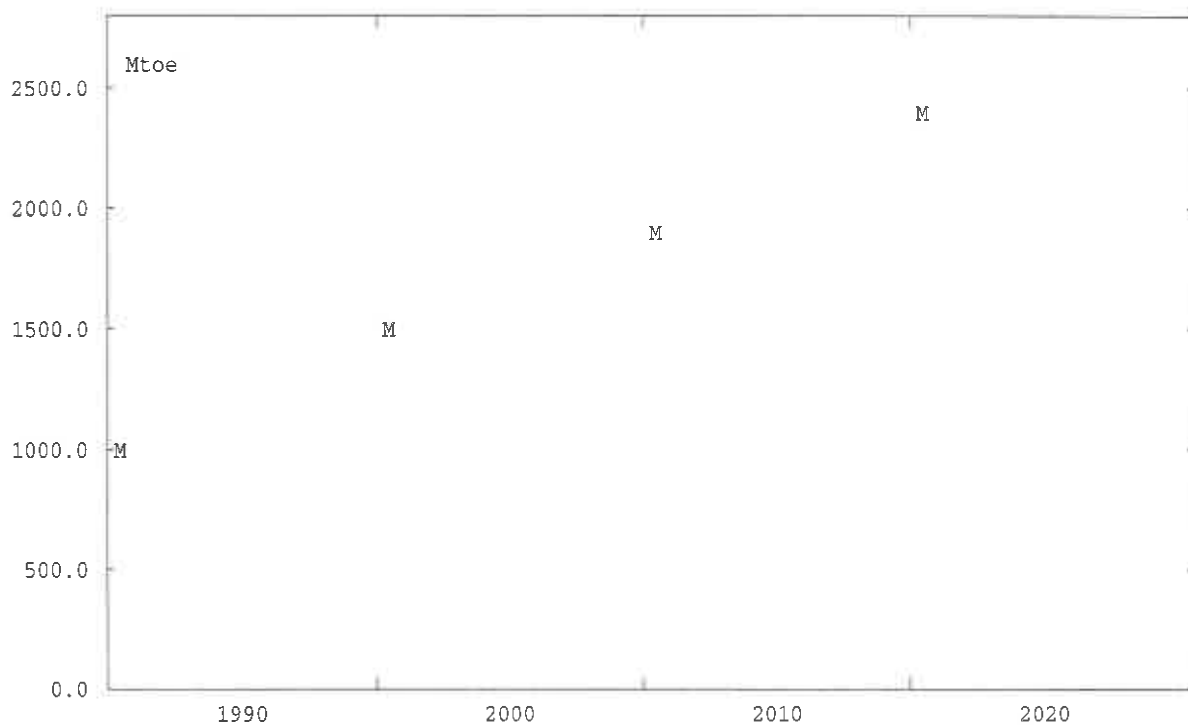


Real GNP (or GDP), Non-OPEC Developing Countries



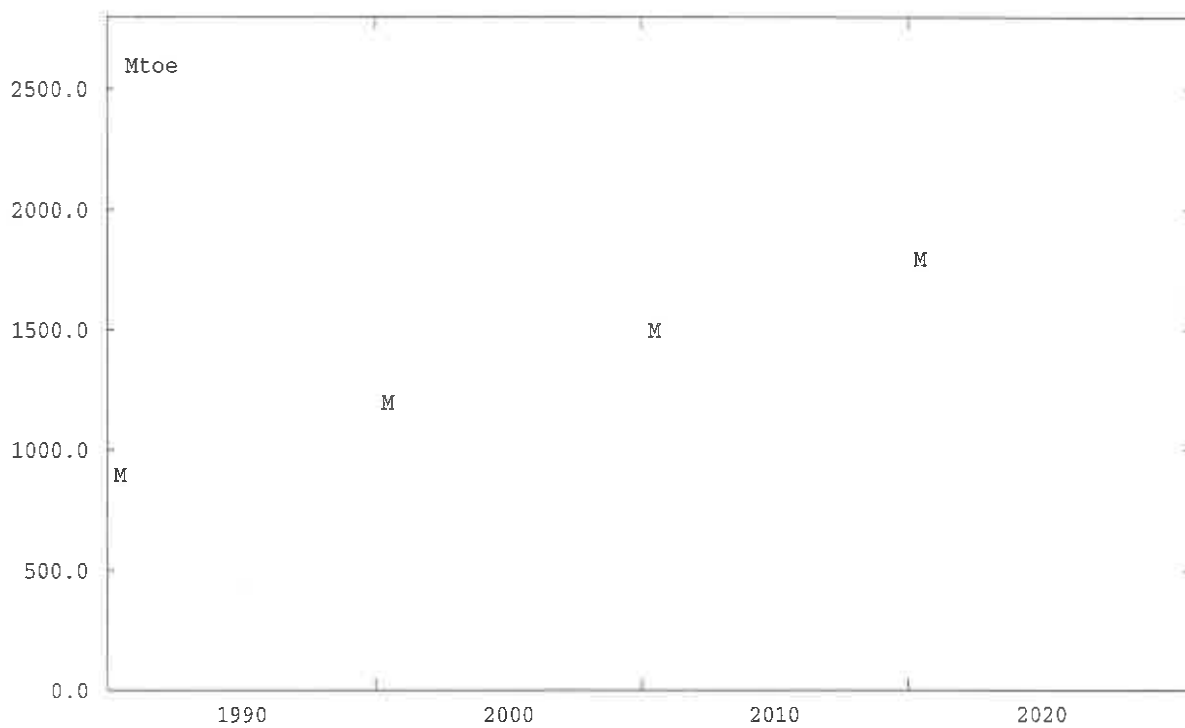
Medians:	100.0	148.2	216.1	313.5
OWREF'95	100.0	148.2	216.1	313.5

Total PE Consumption, Non-OPEC Developing Countries



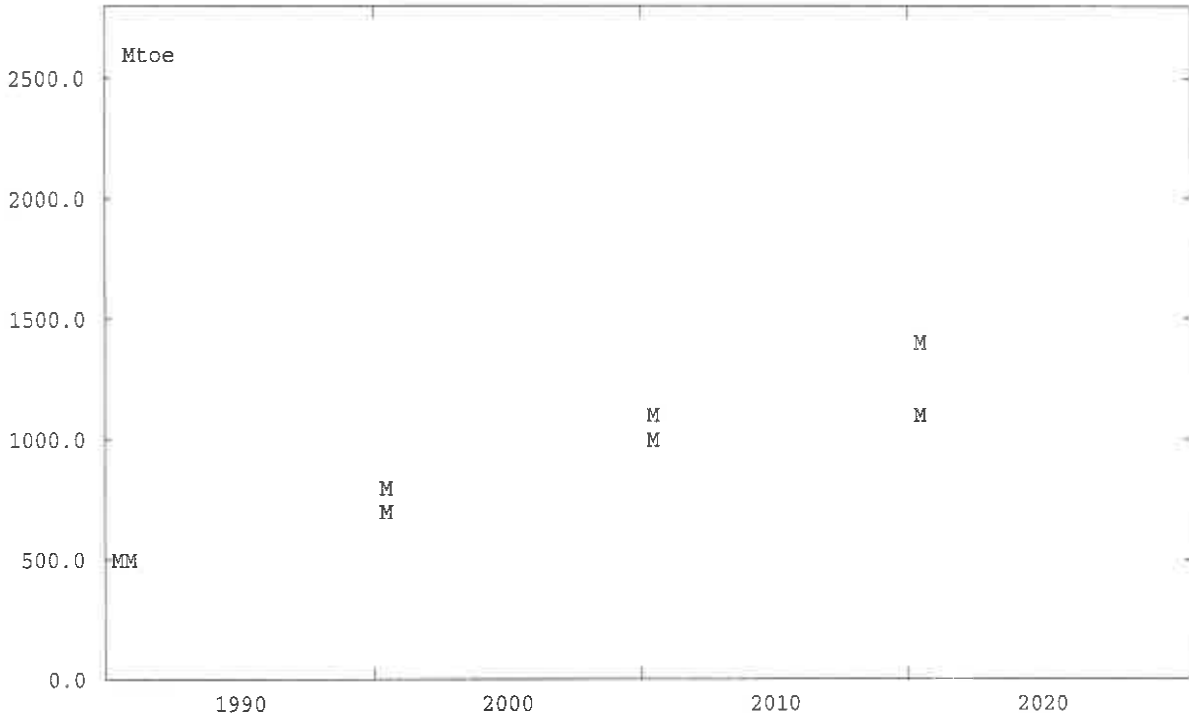
Medians:	1027.1	1489.8	1947.8	2410.3
OWREF'95	1027.1 OWREF'95	1489.8 OWREF'95	1947.8 OWREF'95	2410.3

Total PE Production, Non-OPEC Developing Countries



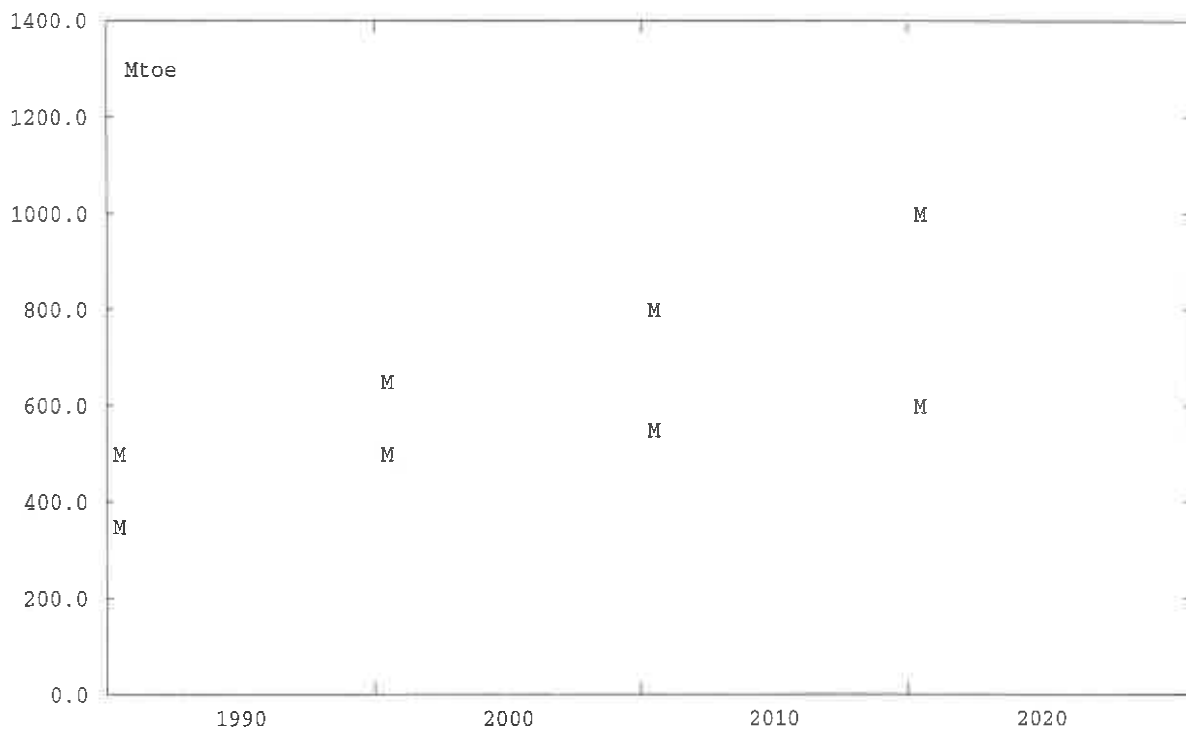
Medians:	874.0	1186.6	1462.4	1787.3
OWREF'95	874.0 OWREF'95	1186.6 OWREF'95	1462.4 OWREF'95	1787.3

Oil Consumption, Non-OPEC Developing Countries



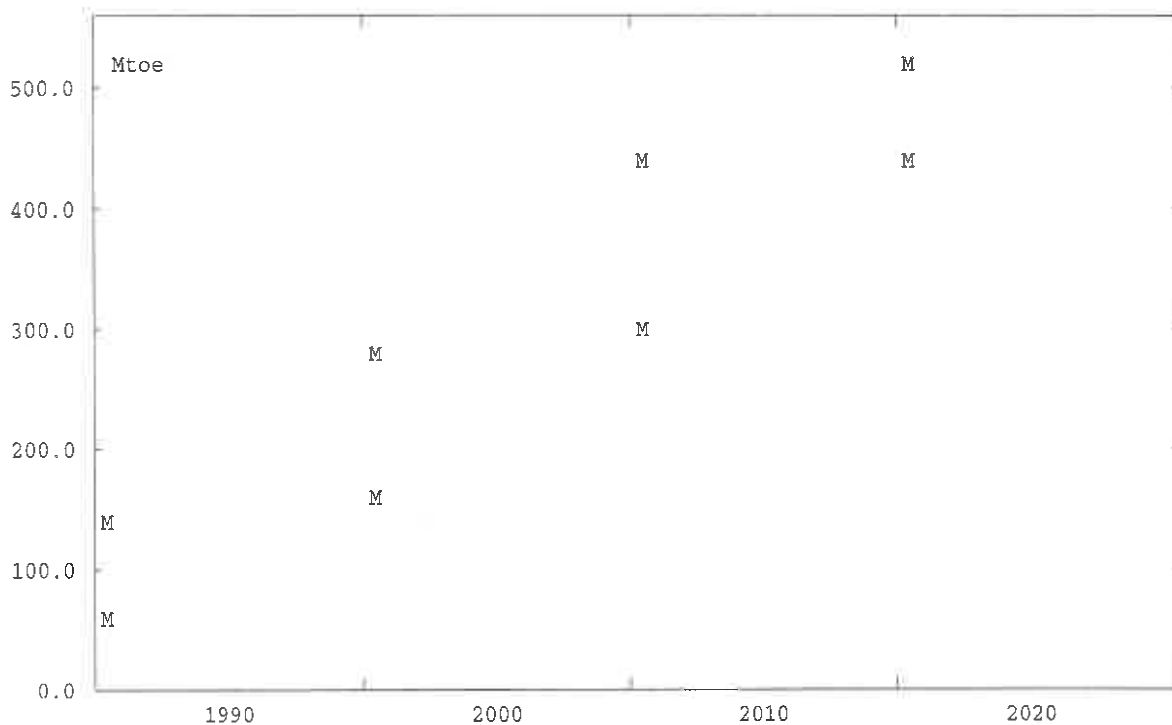
Medians:	518.1	772.9	1041.3	1278.6
LYNCH'94	538.5	797.1	1124.4	1419.3
OWREF'95	497.7	748.7	958.2	1118.0

Oil Production, Non-OPEC Developing Countries



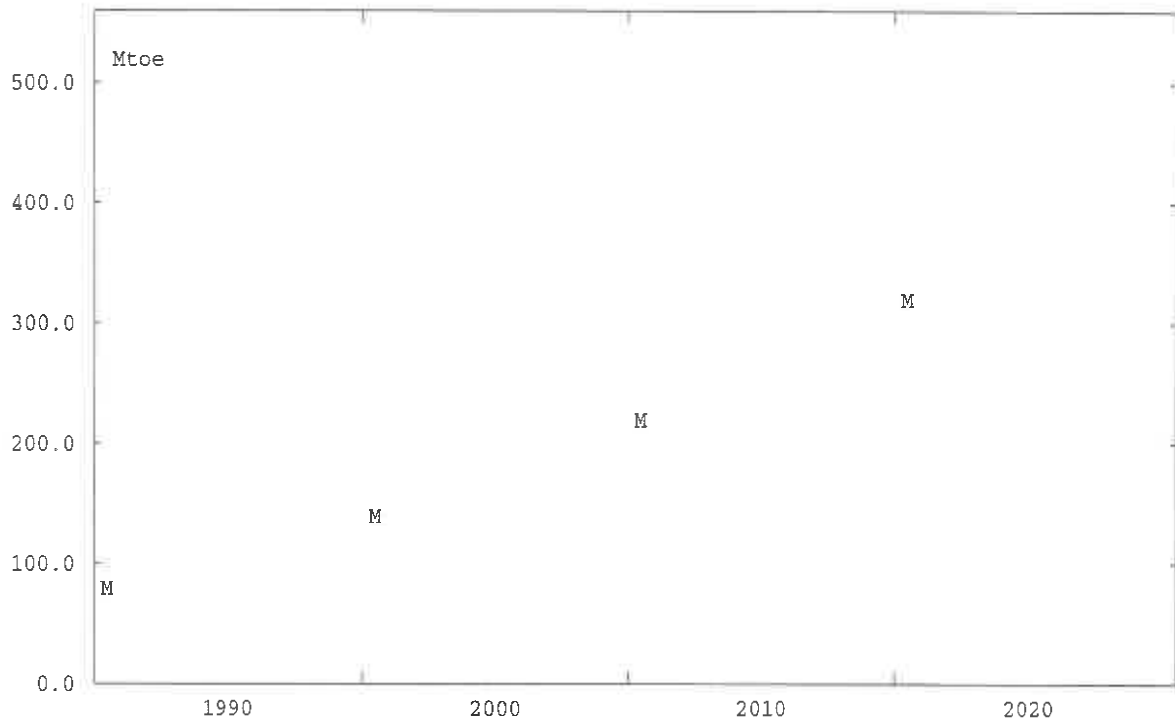
Medians:	419.3	559.7	675.4	796.8
LYNCH'94	475.6	639.2	818.2	997.4
OWREF'95	363.1	480.3	532.7	596.2

Oil Imports - Exports, Non-OPEC Developing Countries



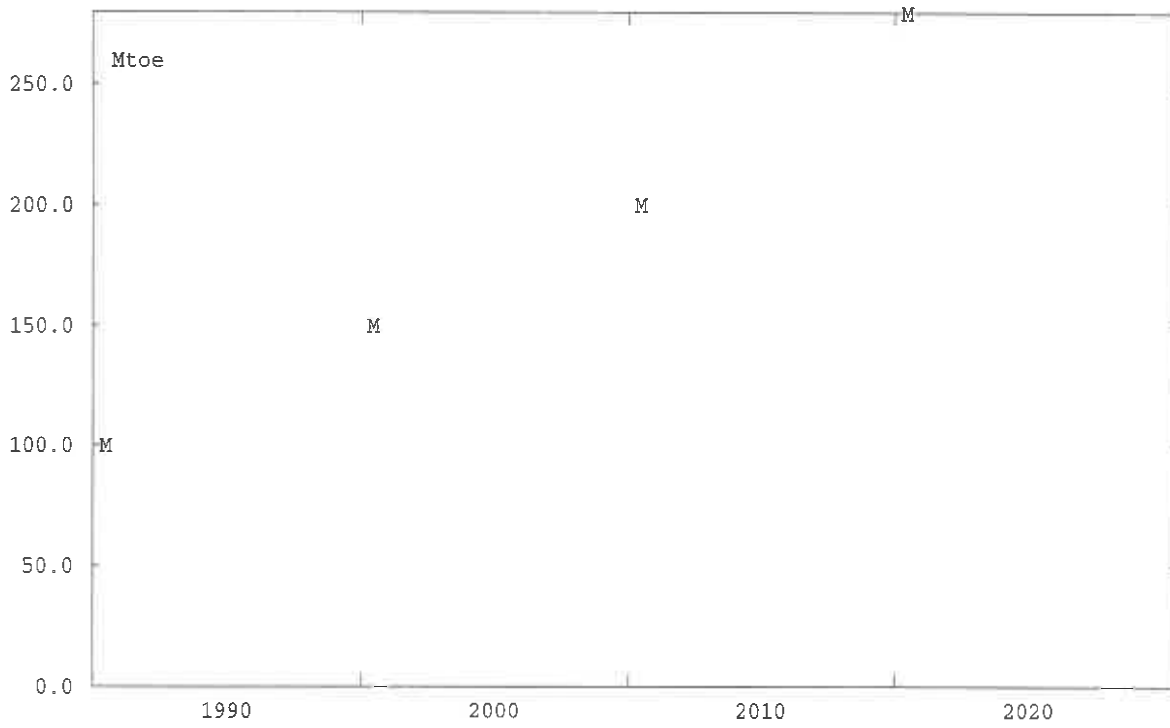
Medians:	1990	2000	2010	2020
	102.4	215.0	368.3	484.6
OWREF'95	141.9	272.2	430.4	527.4
LYNCH'94	62.9	157.9	306.2	441.9

Natural Gas Consumption, Non-OPEC Developing Countries



Medians:	88.6	144.2	210.3	320.7
OWREF'95	88.6	144.2	210.3	320.7

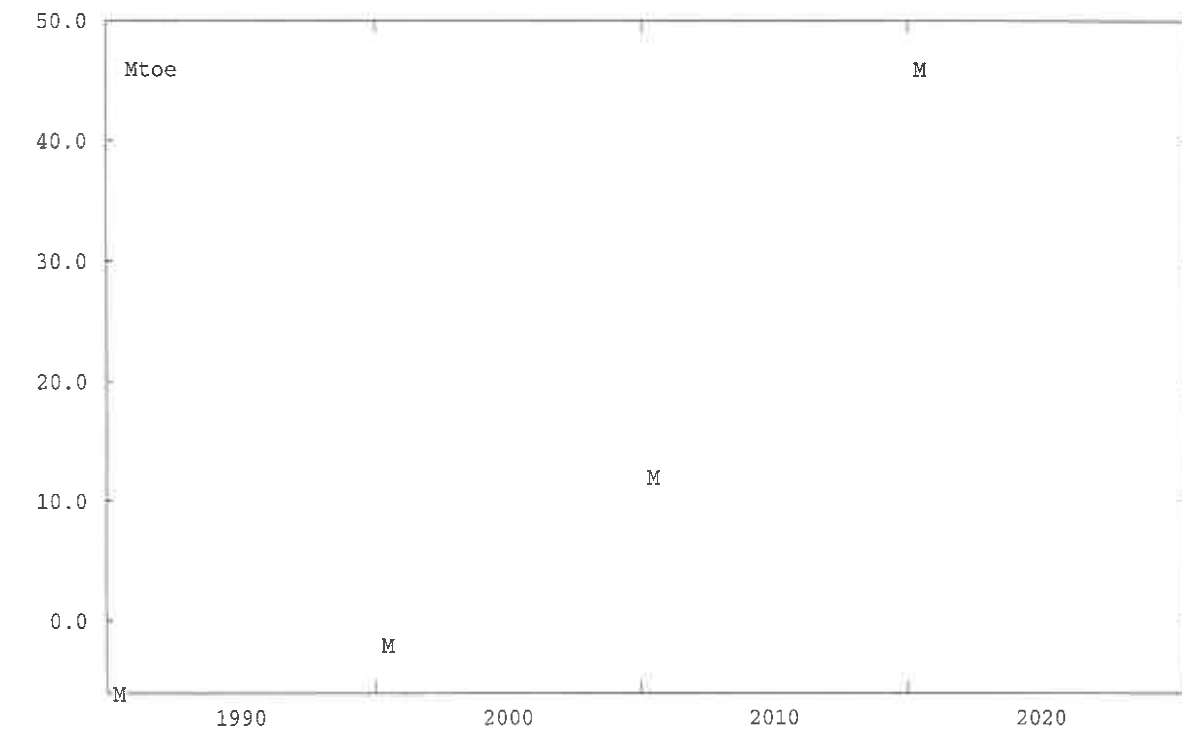
Natural Gas Production, Non-OPEC Developing Countries



Medians:	95.6	147.0	197.9	275.9
OWREF'95	95.6 OWREF'95	147.0 OWREF'95	197.9 OWREF'95	275.9

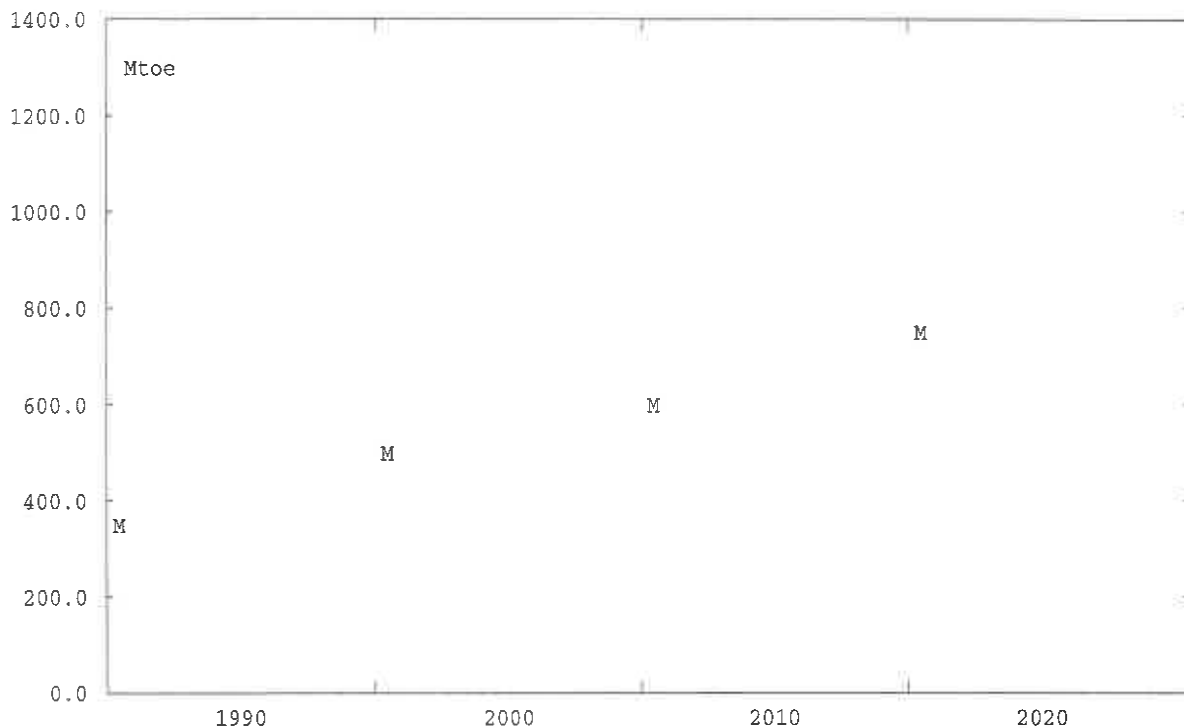


Natural Gas Imports - Exports, Non-OPEC Developing Countries



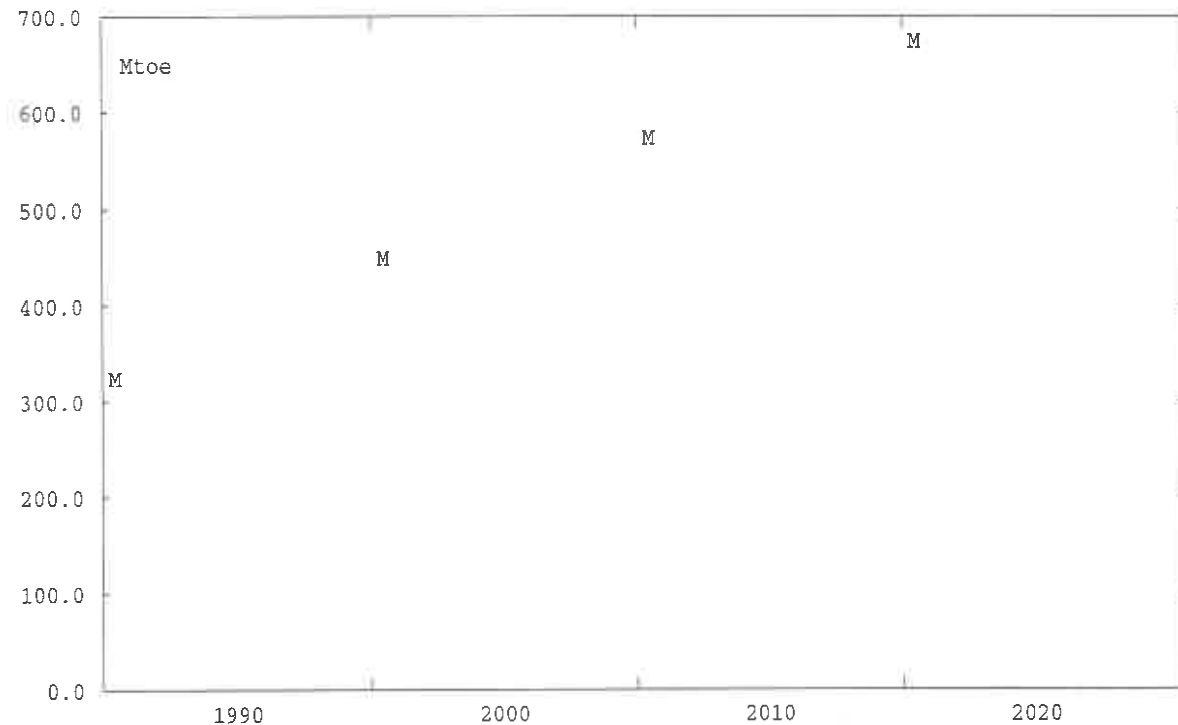
Medians:	1990	2000	2010	2020
	-7.0	-2.4	13.0	45.7
OWREF '95	-7.0 OWREF '95	-2.4 OWREF '95	13.0 OWREF '95	45.7

Coal Consumption, Non-OPEC Developing Countries



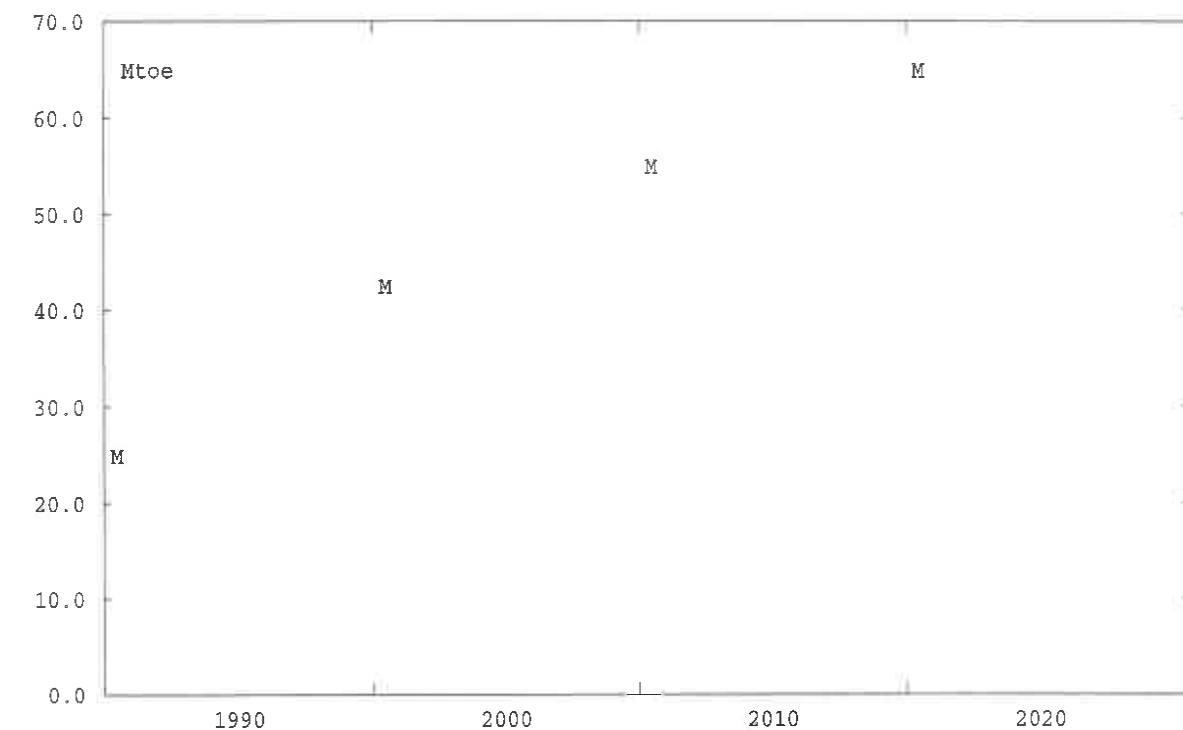
Medians:	356.4	487.5	617.3	731.8
OWREF'95	356.4 OWREF'95	487.5 OWREF'95	617.3 OWREF'95	731.8

Coal Production, Non-OPEC Developing Countries



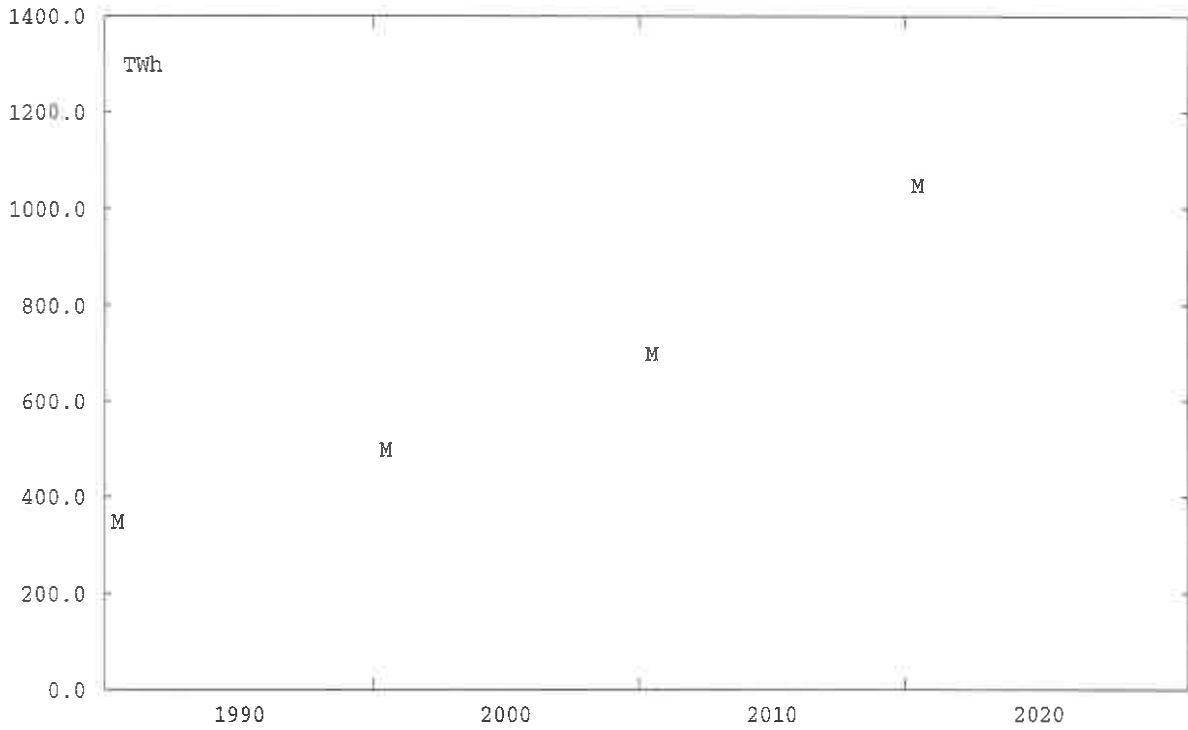
Medians:	330.9	449.9	569.7	675.4
OWREF '95	330.9 OWREF '95	449.9 OWREF '95	569.7 OWREF '95	675.4

Coal Imports - Exports, Non-OPEC Developing Countries



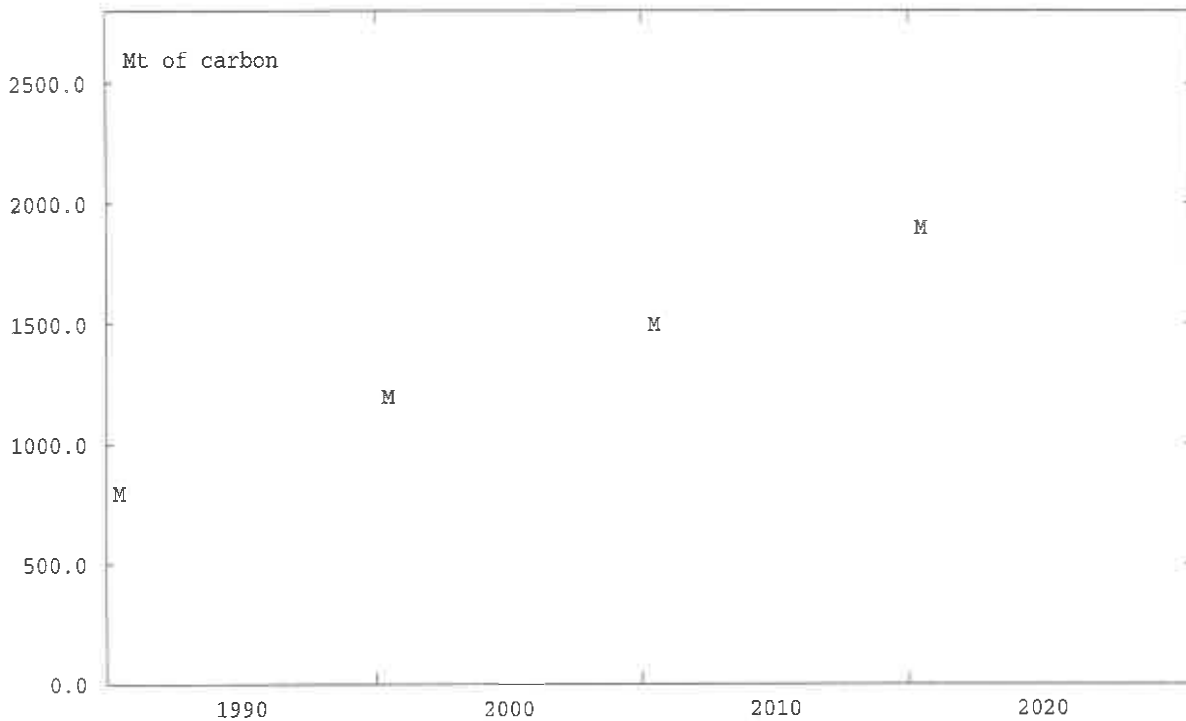
Medians:	25.1	43.2	54.6	64.8
OWREF'95	25.1 OWREF'95	43.2 OWREF'95	54.6 OWREF'95	64.8

Electricity Generation, Non-OPEC Developing Countries



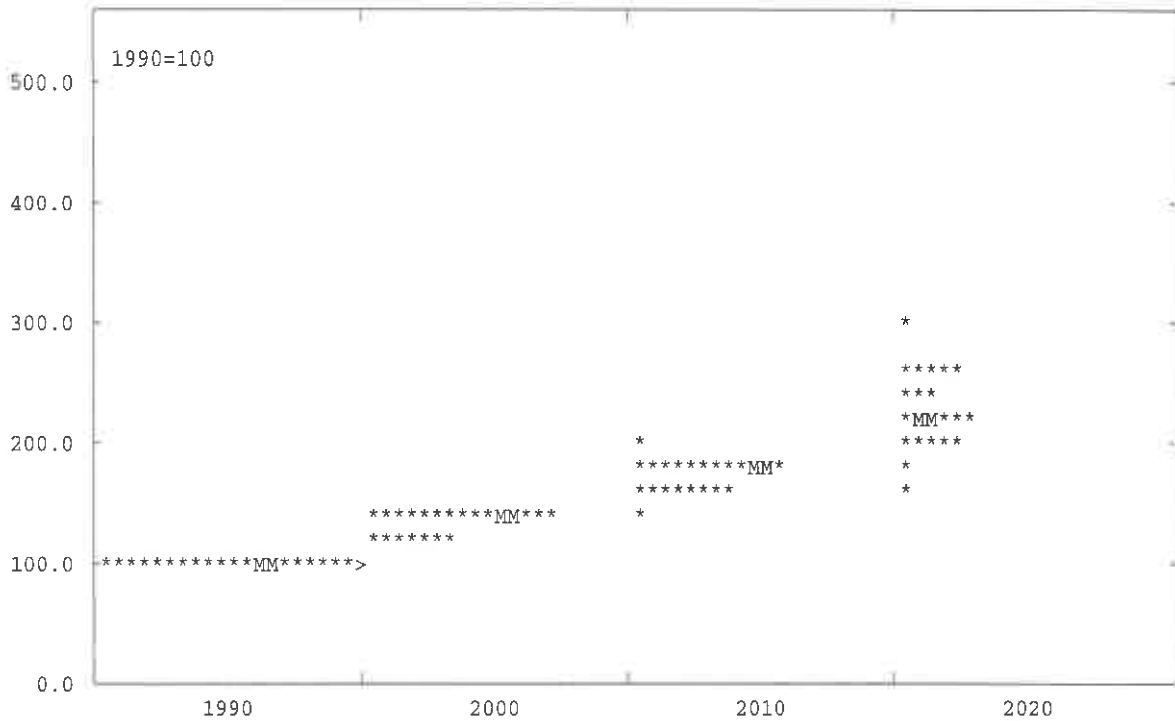
Medians:	366.9	475.9	704.5	1042.8
OWREF'95	366.9	475.9	704.5	1042.8

Carbon Emissions, Non-OPEC Developing Countries



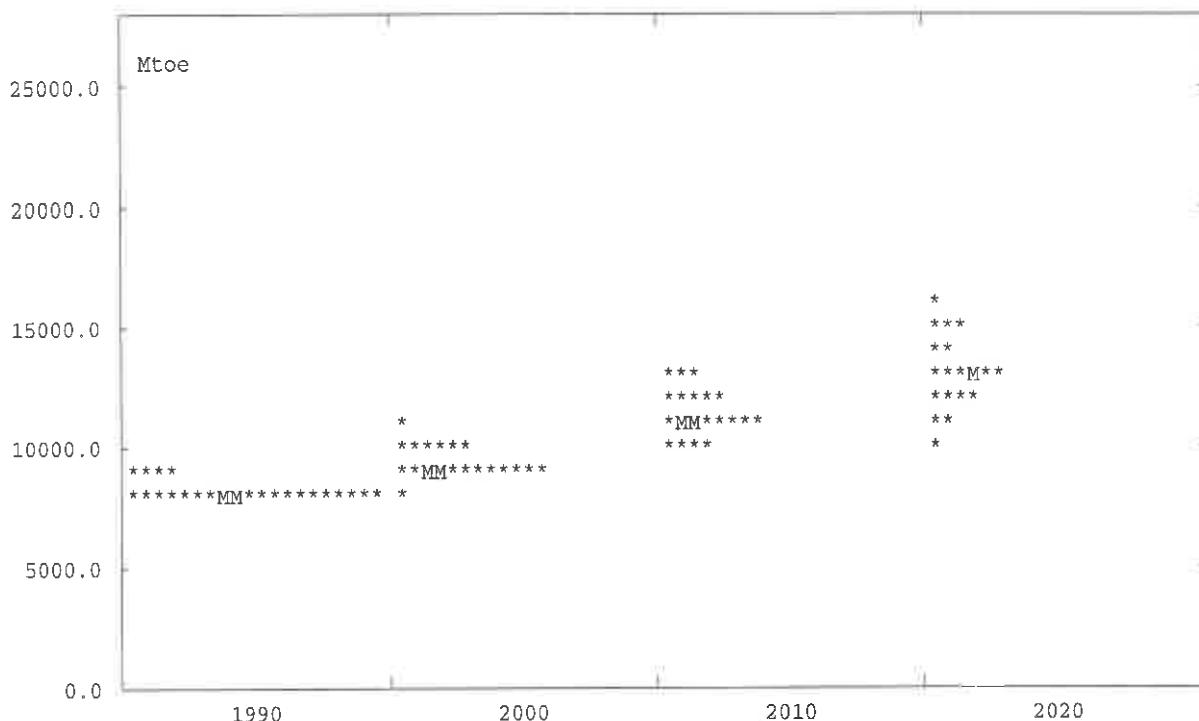
Medians:	830.4	1203.7	1549.8	1868.4
OWREF'95	830.4 OWREF'95	1203.7 OWREF'95	1549.8 OWREF'95	1868.4

Real GNP (or GDP), World, Total



Medians:	1990	2000	2010	2020
AMOCL '93	100.0	138.0	203.0	306.1
CWREF '93	100.0	135.0	189.0	264.9
AMOCH '93	100.0	135.0	184.0	264.9
EUBF '95	100.0	134.5	183.0	264.9
EUCW '95	100.0	133.9	180.0	252.0
EUFO '95	100.0	133.0	179.0	251.0
EIA '95	100.0	133.0	178.9	238.4
GRREF '93	100.0	132.0	177.0	234.0
ECSC '95	100.0	132.0	172.9	234.0
IEA '94	100.0	131.7	172.0	226.0
ITREF '93	100.0	131.5	171.8	224.5
CETA '95	100.0	131.0	171.2	223.4
MERGE '95	100.0	131.0	171.0	223.3
EUHM '95	100.0	131.0	169.1	223.0
ECSA '95	100.0	130.0	167.0	213.0
NEREF '94	100.0	130.0	166.5	209.8
OCELL '94	100.0	127.0	166.0	207.0
OWREF '95	100.0	126.0	163.0	202.0
WECA '93	100.0	125.5	156.4	193.1
WECB '93	100.0	124.8	155.7	192.7
WECB1 '93	100.0	124.0	152.0	183.0
WECC '93	100.0	116.0	133.0	158.0
YOHEB '95	100.0			
YOHEH '95	100.0			
YOHEL '95	100.0			

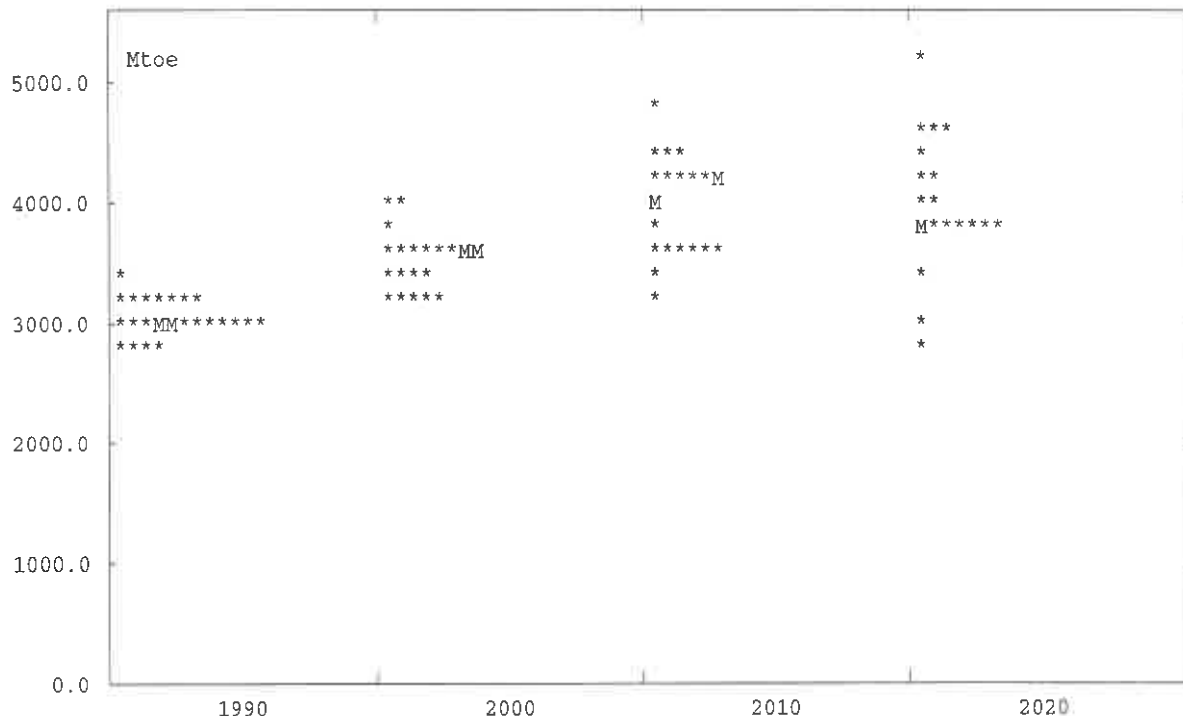
Total PE Consumption, World, Total



Medians:	1990	2000	2010	2020			
ECSCB '95	8976.0	ECSCA '95	10708.9	AMOCH'93	13292.0	WECA '93	15886.0
ECSCA '95	8976.0	AMOCH'93	10472.0	ECSCA '95	12860.0	ECSCA '95	15377.6
ECSC '95	8976.0	ODELL'94	10130.0	GRREF'93	12764.3	GRREF'93	15369.4
ODELL'94	8580.0	ECSCB '95	10108.4	ODELL'94	12165.0	WECB1'93	14684.0
CWREF'93	8197.0	GRREF'93	10066.3	AMOCL'93	12068.0	ODELL'94	14125.0
EUHM '95	8184.0	AMOCL'93	9949.0	IEA '94	11885.0	ECSCB '95	13550.5
EUCW '95	8184.0	ECSC '95	9695.9	ECSCB '95	11750.2	EUHM '95	13174.0
EUBF '95	8184.0	EIA '95	9465.0	DRI '93	11700.0	CWREF'93	13148.0
EUFO '95	8184.0	IEA '94	9397.0	EUHM '95	11289.0	EUCW '95	12615.0
MERGE'95	8160.0	EUHM '95	9368.0	EIA '95	11090.0	EUFO '95	12571.0
AMOCH'93	8155.0	EUBF '95	9319.0	EUCW '95	10955.0	MERGE'95	12561.9
AMOCL'93	8155.0	DRI '93	9307.0	EUFO '95	10889.0	ITREF'93	12507.5
NEREF'94	8152.6	EUCW '95	9266.0	CWREF'93	10864.0	OWREF'95	12263.2
EIA '95	8125.0	CWREF'93	9251.0	OWREF'95	10799.0	NEREF'94	12098.8
GRREF'93	8065.4	OWREF'95	9233.9	ECSC '95	10549.6	WECB '93	12030.0
ITREF'93	8038.5	EUFO '95	9221.0	EUBF '95	10507.0	EUBF '95	11699.0
IEA '94	7995.0	ITREF'93	8981.1	MERGE'95	10368.2	ECSC '95	11424.9
DRI '93	7929.0	MERGE'95	8978.9	ITREF'93	10364.8	CETA '95	11206.0
WECC '93	7877.0	NEREF'94	8949.3	NEREF'94	10287.7	WECC '93	10211.0
WECB '93	7877.0	CETA '95	8454.0	CETA '95	9784.0		
WECA '93	7877.0						
WECB1'93	7877.0						
OWREF'95	7812.6						
CETA '95	7697.0						

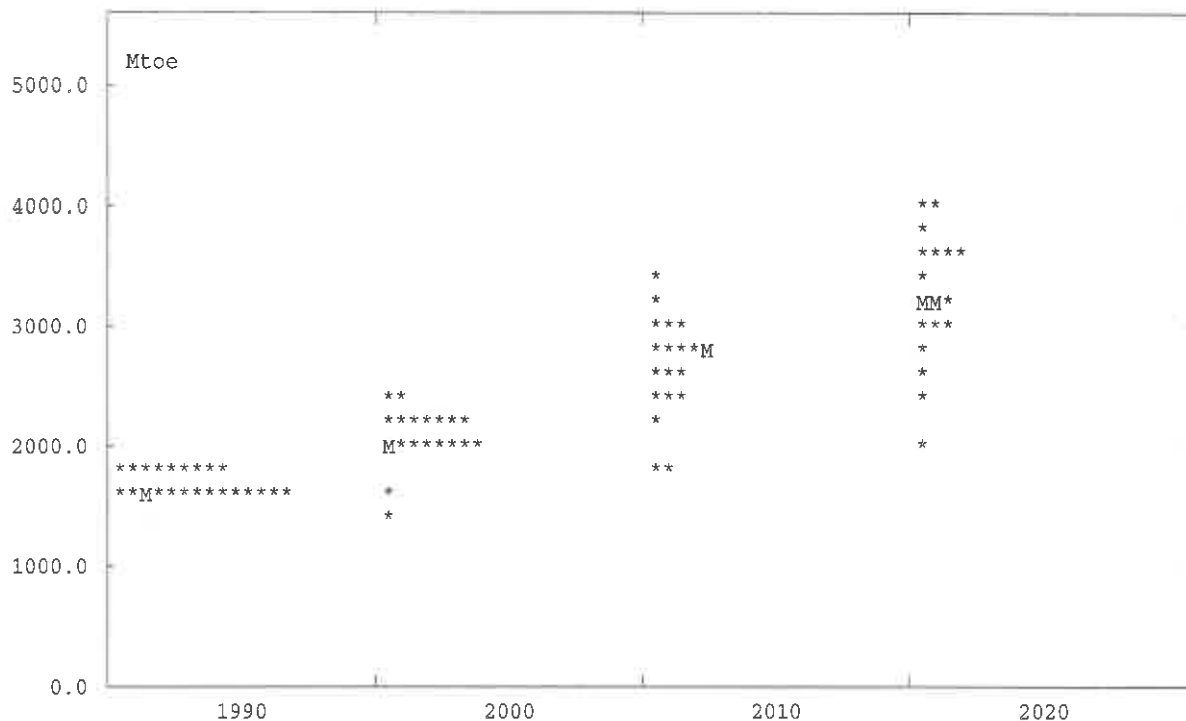


Oil Consumption, World, Total



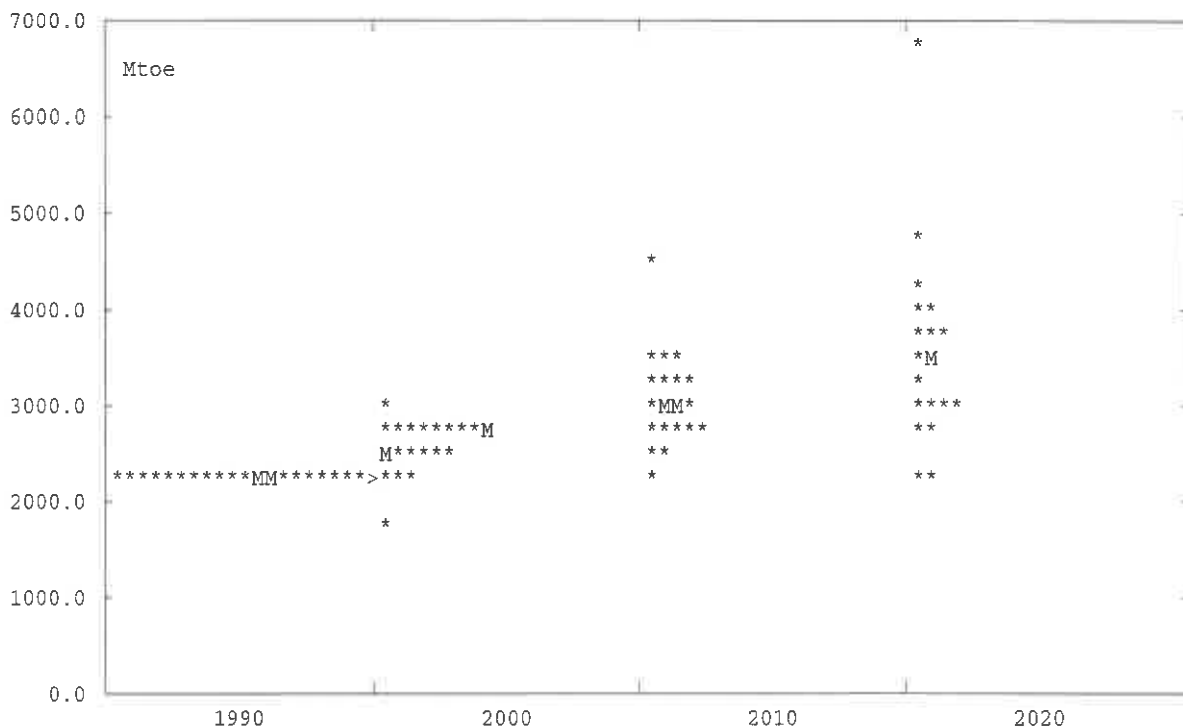
Medians:	1990	2000	2010	2020
GRREF '93	3308.9	4089.9	4717.0	5165.3
NEREF '94	3280.0	3975.2	4496.7	4657.6
EIA '95	3183.0	3869.0	4485.9	4594.0
OWREF '95	3164.3	3695.9	4399.0	4532.0
MERGE '95	3154.4	3690.7	4299.0	4409.6
CWREF '93	3153.0	3679.0	4294.3	4250.1
LYNCH '94	3101.4	3613.4	4263.0	4242.4
ODELL '94	3100.0	3549.1	4190.8	4000.0
DRI '93	3097.0	3534.0	4118.0	3985.0
ITREF '93	3093.1	3531.0	4104.3	3829.9
IEA '94	3071.0	3519.0	4091.9	3823.0
EUBF '95	3066.0	3454.2	3770.0	3783.1
EUHM '95	3066.0	3390.0	3649.0	3768.0
EUFO '95	3066.0	3355.0	3641.0	3746.4
EUCW '95	3066.0	3350.0	3629.4	3725.0
AMOCL '93	3065.0	3278.3	3544.2	3719.0
ECSC '95	3065.0	3259.0	3537.0	3493.0
ECSA '95	3063.9	3239.0	3537.0	3021.4
ECSB '95	3063.9	3206.0	3388.0	2899.0
ECSC '95	3063.9	3206.0	3219.6	
WECC '93	2773.0			
WECA '93	2773.0			
WECEB '93	2773.0			
WECEB1 '93	2773.0			

Natural Gas Consumption, World, Total



Medians:	1990	2000	2010	2020
ITREF '93	1741.6	2367.0	3393.0	4050.0
MERGE '95	1741.3	2350.0	3220.0	3977.0
ODELL '94	1740.0	2281.0	3043.0	3746.0
DRI '93	1731.0	2164.0	2981.0	3699.0
WECC '93	1718.0	2156.0	2906.0	3647.0
WECB '93	1718.0	2152.0	2849.0	3624.6
WECA '93	1718.0	2139.6	2804.4	3561.0
WECB1 '93	1718.0	2136.0	2767.0	3388.0
CWREF '93	1713.0	2118.0	2747.0	3190.4
EIA '95	1693.0	2097.0	2718.0	3180.8
EUHM '95	1685.0	2081.7	2597.9	3143.8
EUCW '95	1685.0	2026.0	2579.5	3058.0
EUBF '95	1685.0	2020.0	2511.0	2976.0
EUFO '95	1685.0	1983.5	2481.9	2922.7
ECSC '95	1684.9	1968.1	2437.1	2709.0
ECSA '95	1684.9	1934.9	2381.6	2553.3
ECSC '95	1684.9	1928.6	2222.0	2484.0
IEA '94	1683.0	1540.8	1798.4	1989.3
AMOCH '93	1677.0	1470.3	1718.4	
AMOCL '93	1677.0			
NEREF '94	1625.7			
OWREF '95	1614.5			
GRREF '93	1534.9			

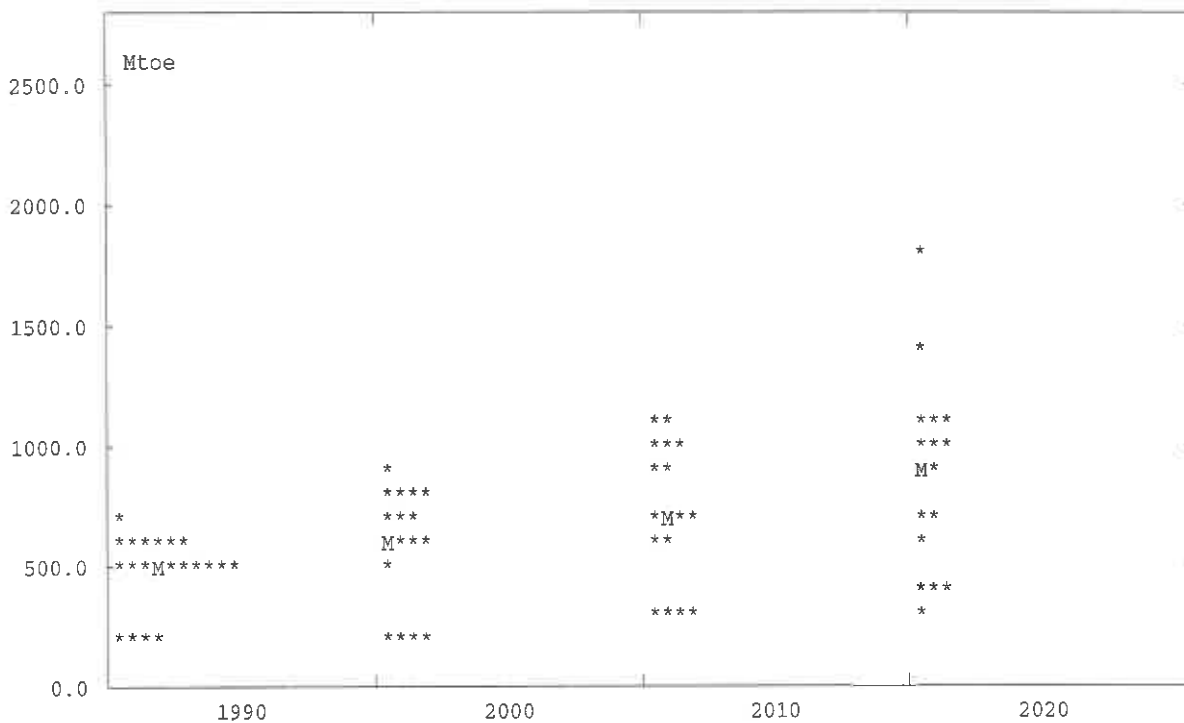
Coal Consumption, World, Total



Medians:            2214.9                    2618.0                    3042.6                    3393.8

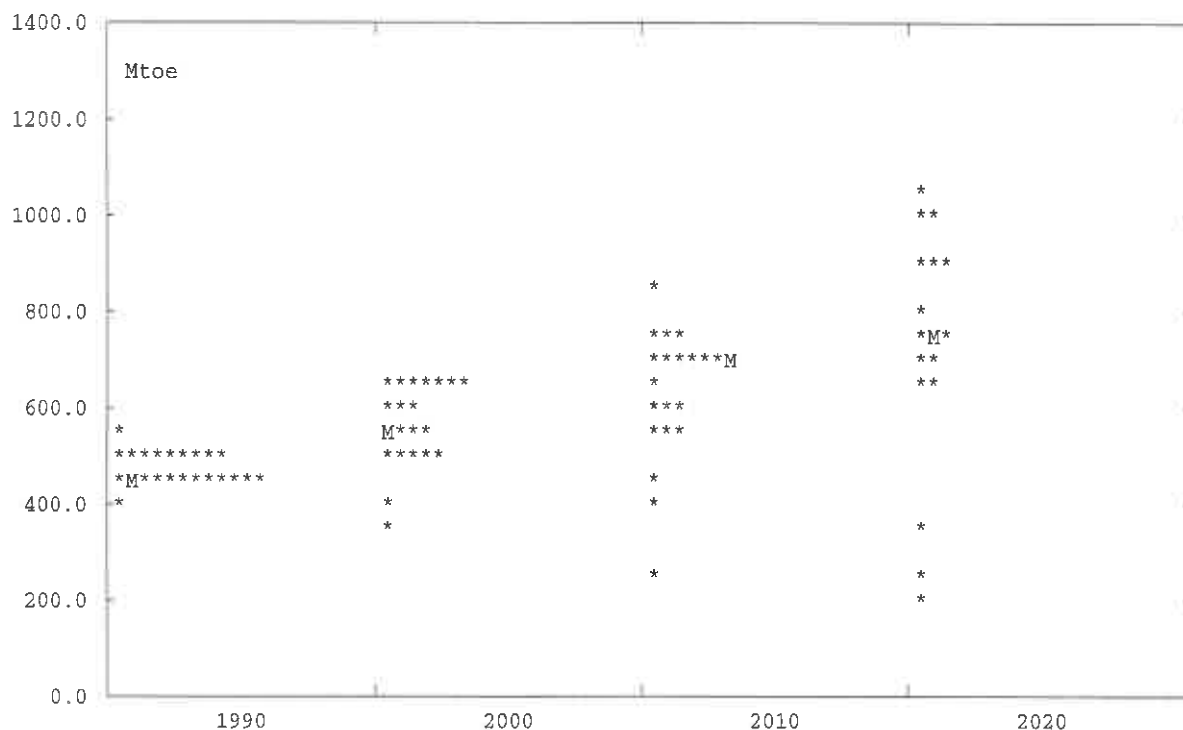
DRI '93	2363.0	GRREF'93	3070.2	GRREF'93	4408.8	GRREF'93	6676.3
GRREF'93	2317.4	AMOCH'93	2781.0	DRI '93	3463.0	WECA '93	4854.0
WECC '93	2317.0	AMOCL'93	2722.0	AMOCH'93	3459.0	CWREF'93	4178.0
WECB1'93	2317.0	ECSA '95	2720.6	CWREF'93	3397.0	MERGE'95	4035.3
WECA '93	2317.0	NEREF'94	2718.3	IEA '94	3363.0	ITREF'93	3987.5
WECA '93	2317.0	CETA '95	2704.0	NEREF'94	3266.5	WECB1'93	3814.0
IEA '94	2301.0	OWREF'95	2693.1	ECSA '95	3229.4	NEREF'94	3758.1
AMOCL'93	2297.0	DRI '93	2693.0	AMOCL'93	3208.0	ECSA '95	3714.7
AMOCH'93	2297.0	MERGE'95	2672.8	OWREF'95	3110.5	OWREF'95	3462.4
OWREF'95	2281.8	IEA '94	2627.0	MERGE'95	3094.1	ECSB '95	3393.8
CWREF'93	2266.0	CWREF'93	2609.0	CETA '95	2991.0	CETA '95	3271.0
NEREF'94	2239.7	ECSB '95	2438.0	ECSB '95	2880.7	EUHM '95	3083.0
EUFO '95	2190.0	EUBF '95	2432.0	EUHM '95	2808.0	WECB '93	3035.0
EUBF '95	2190.0	ODELL'94	2420.0	EIA '95	2774.0	EUCW '95	3024.0
EUCW '95	2190.0	EUCW '95	2406.0	EUCW '95	2756.0	ODELL'94	2885.0
ODELL'94	2190.0	EUHM '95	2405.0	ITREF'93	2698.7	EUBF '95	2801.0
EUHM '95	2190.0	EIA '95	2363.0	ODELL'94	2690.0	EUFO '95	2794.0
ECSA '95	2176.4	EUFO '95	2292.0	EUBF '95	2587.0	ECSC '95	2290.6
ECSB '95	2176.4	ECSC '95	2205.1	EUFO '95	2558.0	WECC '93	2129.0
ECSC '95	2176.4	ITREF'93	1862.1	ECSC '95	2310.4		
MERGE'95	2167.0						
EIA '95	2161.0						
CETA '95	2154.0						
ITREF'93	2141.8						

Renewables, Electric, World, Total



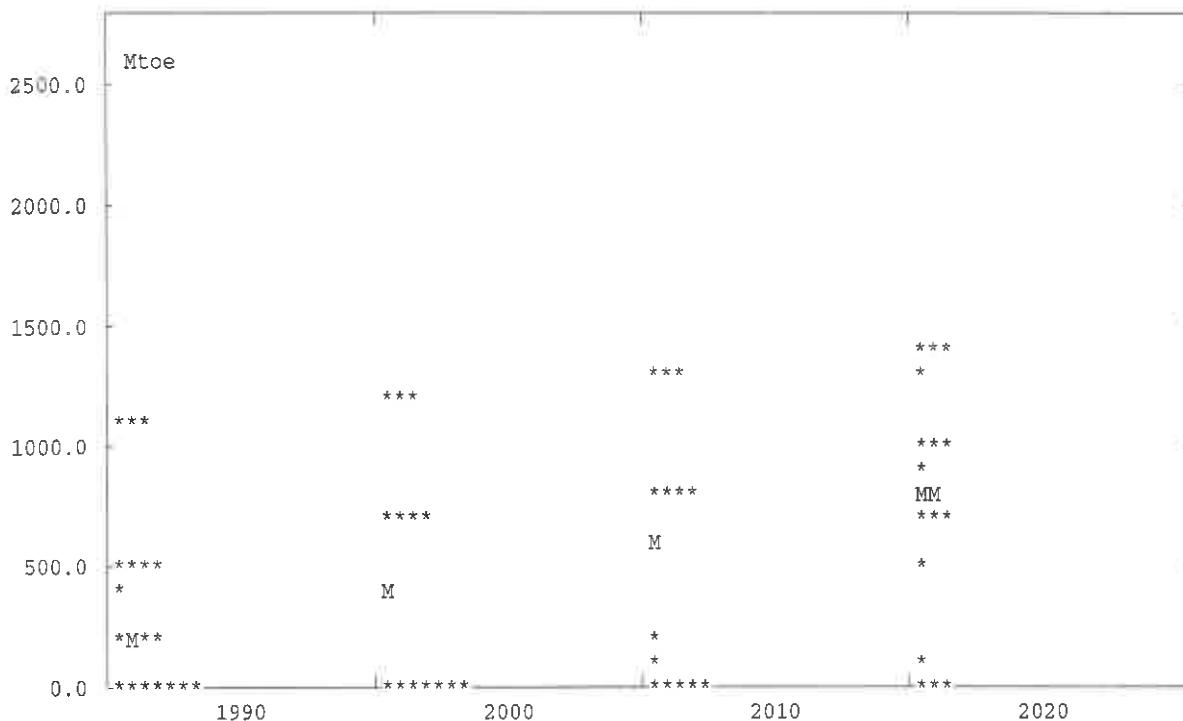
	1990	2000	2010	2020
Medians:	533.1	595.6	695.6	920.0
ODELL '94	660.0	900.0	1083.9	1846.8
EIA '95	616.0	811.0	1080.0	1410.0
MERGE '95	608.8	802.0	1036.0	1069.9
AMOCH '93	593.0	773.6	999.0	1059.0
AMOCL '93	593.0	766.0	966.0	1051.0
ITREF '93	591.3	707.0	864.0	1001.0
CWREF '93	572.0	656.8	857.0	988.0
ECSB '95	533.6	652.0	747.4	952.5
ECSA '95	533.6	595.6	695.6	920.0
ECSC '95	533.6	594.1	677.3	853.1
NEREF '94	533.1	563.5	654.7	734.3
CETA '95	496.0	560.1	636.0	661.0
IEA '94	481.0	496.0	597.5	601.0
WECC '93	464.0	231.0	297.0	371.0
WECA '93	464.0	231.0	293.0	365.0
WECB '93	464.0	231.0	287.0	353.0
WECB1 '93	464.0	230.0	270.0	324.0
EUHM '95	188.0			
EUBF '95	188.0			
EUCW '95	188.0			
EUFO '95	188.0			

Nuclear Energy, World, Total



Medians:	1990	2000	2010	2020
ODELL'94	540.0	665.0	825.0	1050.0
AMOCCH'93	524.0	646.0	760.0	982.0
AMOCL'93	524.0	637.0	748.0	980.0
EUCW '95	518.0	634.0	725.0	906.8
EUFO '95	518.0	628.0	708.0	904.1
EUHM '95	518.0	627.0	700.0	894.0
EUBF '95	518.0	625.0	700.0	792.0
CWREF'93	493.0	599.0	691.0	759.0
MERGE'95	488.3	586.0	688.0	752.0
EIA '95	477.0	582.0	687.0	729.0
NEREF'94	474.2	566.6	677.2	712.0
ITREF'93	470.7	557.0	674.8	694.0
IAEAH'95	460.0	556.0	624.0	674.8
IAEAL'95	460.0	540.0	605.0	669.0
ECSB '95	450.1	522.3	591.0	344.2
ECSA '95	450.1	519.3	574.0	244.7
ECSC '95	450.1	511.9	569.7	211.0
IEA '94	450.0	507.0	569.0	
WECEB '93	442.0	488.3	472.8	
WECC '93	442.0	421.0	412.0	
WECA '93	442.0	353.3	236.2	
WECEB1'93	442.0			
CETA '95	421.0			

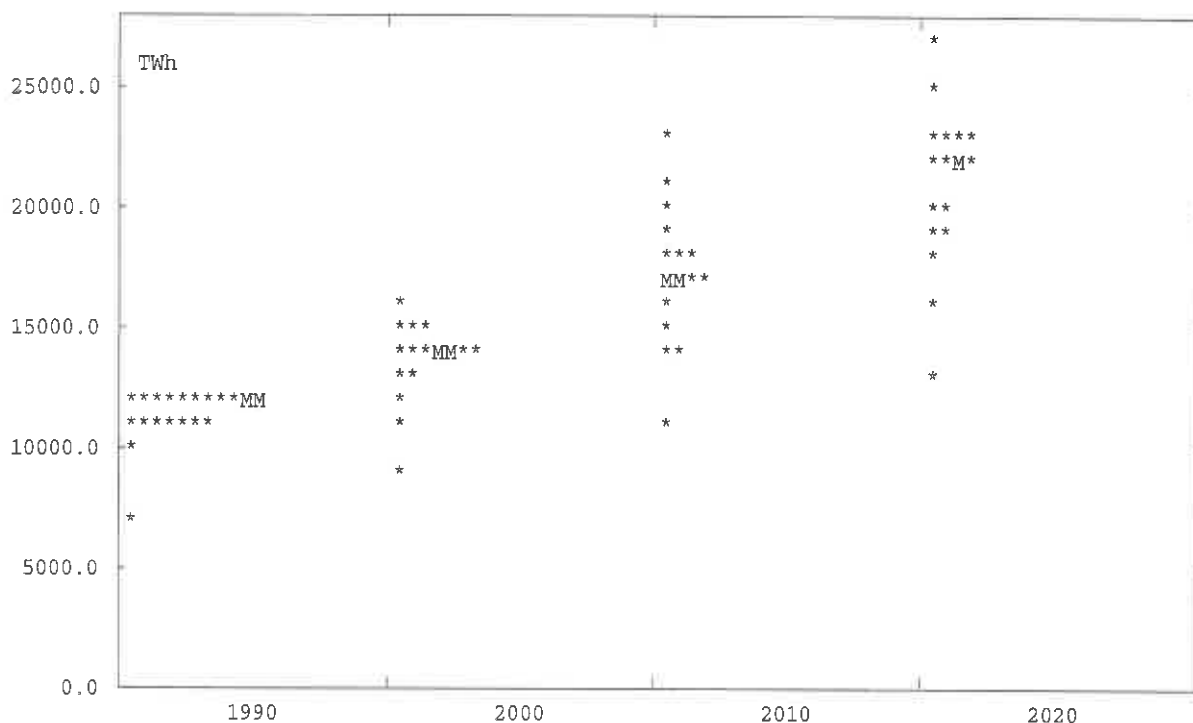
Renewables, Nonelectric, World, Total



Medians: 1990 2000 2010 2020

ECSC '95	1067.3	ECSB '95	1198.8	ECSC '95	1300.4	ECSB '95	1435.6
ECSA '95	1067.3	ECSA '95	1184.8	ECSA '95	1297.2	ECSC '95	1433.3
ECSC '95	1067.3	ECSC '95	1153.5	ECSC '95	1290.6	ECSA '95	1403.9
EUFO '95	543.0	EUFO '95	677.0	EUFO '95	844.0	WECC '93	1344.0
EUBF '95	543.0	EUBF '95	677.0	EUHM '95	834.0	EUFO '95	1046.0
EUCW '95	543.0	EUCW '95	677.0	EUCW '95	826.0	EUHM '95	1004.0
EUHM '95	543.0	EUHM '95	677.0	EUBF '95	804.0	EUCW '95	987.0
ODELL '94	350.0	ODELL '94	440.0	ODELL '94	580.0	EUBF '95	941.0
WECA '93	164.0	IEA '94	25.0	CWREF '93	159.0	WECB1 '93	809.0
WECB '93	164.0	CWREF '93	12.0	ITREF '93	62.2	WECA '93	809.0
WECB1 '93	164.0	ITREF '93	0.0	IEA '94	44.0	ODELL '94	730.0
WECC '93	164.0	CETA '95	0.0	MERGE '95	13.0	CWREF '93	691.0
IEA '94	9.0	GRREF '93	0.0	GRREF '93	0.0	ITREF '93	684.6
ITREF '93	0.0	NEREF '94	0.0	CETA '95	0.0	WECB '93	539.0
CWREF '93	0.0	MERGE '95	0.0	NEREF '94	0.0	MERGE '95	107.1
CETA '95	0.0					GRREF '93	0.1
GRREF '93	0.0					CETA '95	0.0
NEREF '94	0.0					NEREF '94	0.0
MERGE '95	0.0						

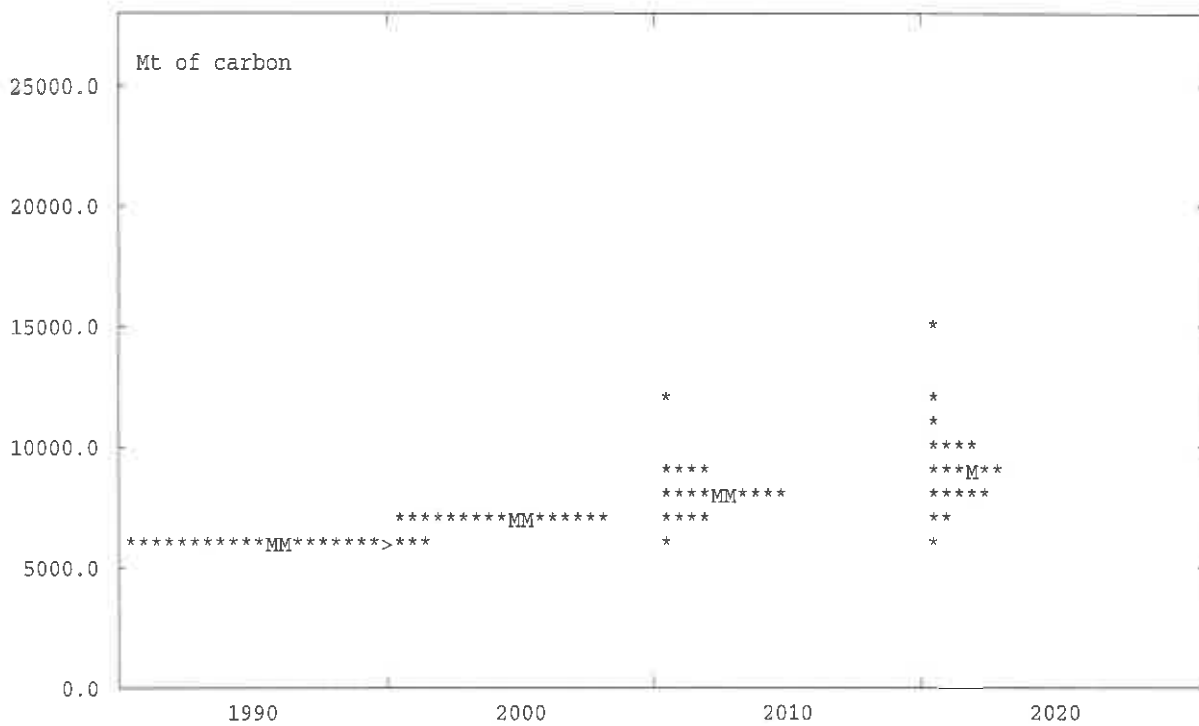
Electricity Generation, World, Total



Medians:           11594.0                   14069.7                   16956.3                   21586.3

MERGE'95	11831.0	AMOCB'93	16307.0	AMOCB'93	23206.0	WECA '93	26560.0
IEA '94	11822.0	AMOCL'93	15208.0	AMOCL'93	20849.0	WECB1'93	25498.0
ECSC '95	11651.0	IEA '94	14976.0	IEA '94	20450.0	EUHM '95	23282.0
ECSC '95	11651.0	EUHM '95	14536.0	EUHM '95	18880.0	WECB '93	23012.0
ECSB '95	11651.0	EUBF '95	14422.0	EUFO '95	18320.0	EUFO '95	22712.0
WECA '93	11607.7	ECSC '95	14320.3	EUCW '95	18085.0	MERGE'95	22566.2
WECC '93	11607.7	EUFO '95	14293.0	ECSC '95	17552.5	EUCW '95	21923.0
WECB1'93	11607.7	EUCW '95	14293.0	NEREF'94	16992.0	NEREF'94	21804.2
WECB '93	11607.7	ITREF'93	13846.5	ITREF'93	16920.6	ITREF'93	21586.3
AMOCL'93	11594.0	NEREF'94	13749.5	EUBF '95	16909.0	ECSC '95	21585.6
AMOCB'93	11594.0	ECSB '95	13506.2	MERGE'95	16715.6	CWREF'93	20202.0
EUBF '95	11467.0	MERGE'95	13386.6	ECSB '95	15944.7	EUBF '95	19884.0
EUHM '95	11467.0	ECSC '95	13019.8	CWREF'93	15479.0	ECSB '95	19119.5
EUFO '95	11467.0	CWREF'93	12259.0	GRREF'93	14305.5	WECC '93	18596.0
EUCW '95	11467.0	GRREF'93	11121.7	ECSC '95	14131.6	GRREF'93	17748.8
NEREF'94	11374.0	OWREF'95	9210.1	OWREF'95	10889.7	ECSC '95	16102.8
CWREF'93	11202.0					OWREF'95	12607.4
ITREF'93	11042.0						
GRREF'93	10301.1						
OWREF'95	7310.2						

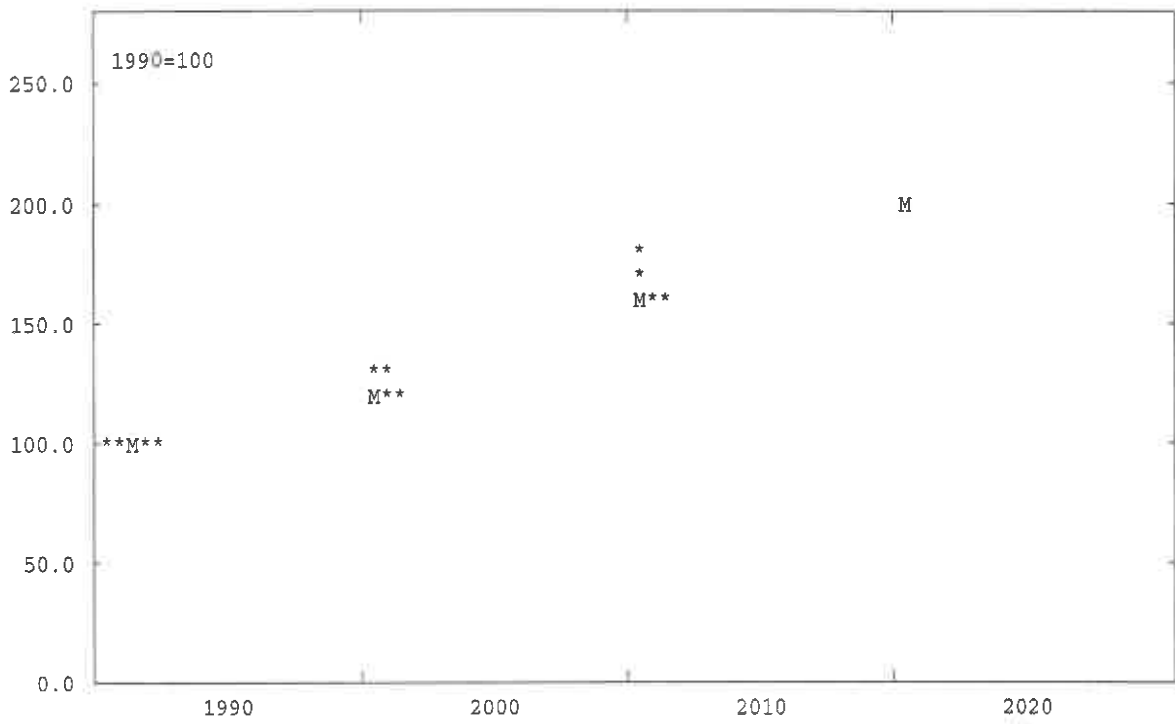
Carbon Emissions, World, Total



Medians:	1990	2000	2010	2020			
	5923.0	6732.1	7903.8	9029.8			
ECSA '95	6037.7	GRREF'93	7471.0	YOHEH'95	11913.0	YOHEH'95	15217.0
ECSEB '95	6030.0	YOHEH'95	7424.0	AMOCHE'93	9414.0	GRREF'93	11733.2
ECSC '95	6025.7	AMOCHE'93	7401.0	GRREF'93	9269.9	WECA '93	11462.6
EIA '95	6013.0	ECSA '95	7339.6	YOHEB'95	8797.0	YOHEB'95	10324.0
CWREF'93	6002.0	YOHEB'95	7301.0	ECSA '95	8772.0	WECB1'93	10227.6
WECA '93	5944.2	AMOCHE'93	7013.0	AMOCHE'93	8466.0	ECSA '95	10177.9
WECB '93	5944.2	OWREF'95	6933.2	EIA '95	8092.0	MERGE'95	9605.2
WECB1'93	5944.2	EIA '95	6901.0	OWREF'95	8047.2	EUHM '95	9192.0
WECC '93	5944.2	ECSEB '95	6830.5	EUHM '95	7946.0	CWREF'93	9139.0
OWREF'95	5931.0	CWREF'93	6738.0	ECSEB '95	7917.5	ITREF'93	9125.3
EUBF '95	5923.0	MERGE'95	6726.2	CWREF'93	7890.0	ECSEB '95	9029.8
EUFO '95	5923.0	EUHM '95	6631.0	MERGE'95	7862.7	OWREF'95	9019.3
EUCW '95	5923.0	ITREF'93	6614.8	ITREF'93	7849.9	EUCW '95	8804.0
EUHM '95	5923.0	EUBF '95	6605.0	EUCW '95	7707.0	EUFO '95	8496.0
GRREF'93	5911.4	EUCW '95	6566.0	EUFO '95	7537.0	CETA '95	8481.0
YOHEB'95	5865.0	CETA '95	6509.0	CETA '95	7496.0	WECB '93	8366.6
YOHEH'95	5865.0	EUFO '95	6500.0	EUBF '95	7345.0	EUBF '95	8082.0
YOHEL'95	5865.0	ECSC '95	6420.7	NEREF'94	7086.3	NEREF'94	7957.2
MERGE'95	5864.0	NEREF'94	6287.2	ECSC '95	6777.9	ECSC '95	6844.3
ITREF'93	5863.0	YOHEL'95	6093.0	YOHEL'95	6119.0	YOHEL'95	6510.0
AMOCHE'93	5836.0					WECC '93	6338.4
AMOCHE'93	5836.0						
NEREF'94	5830.2						
CETA '95	5763.0						

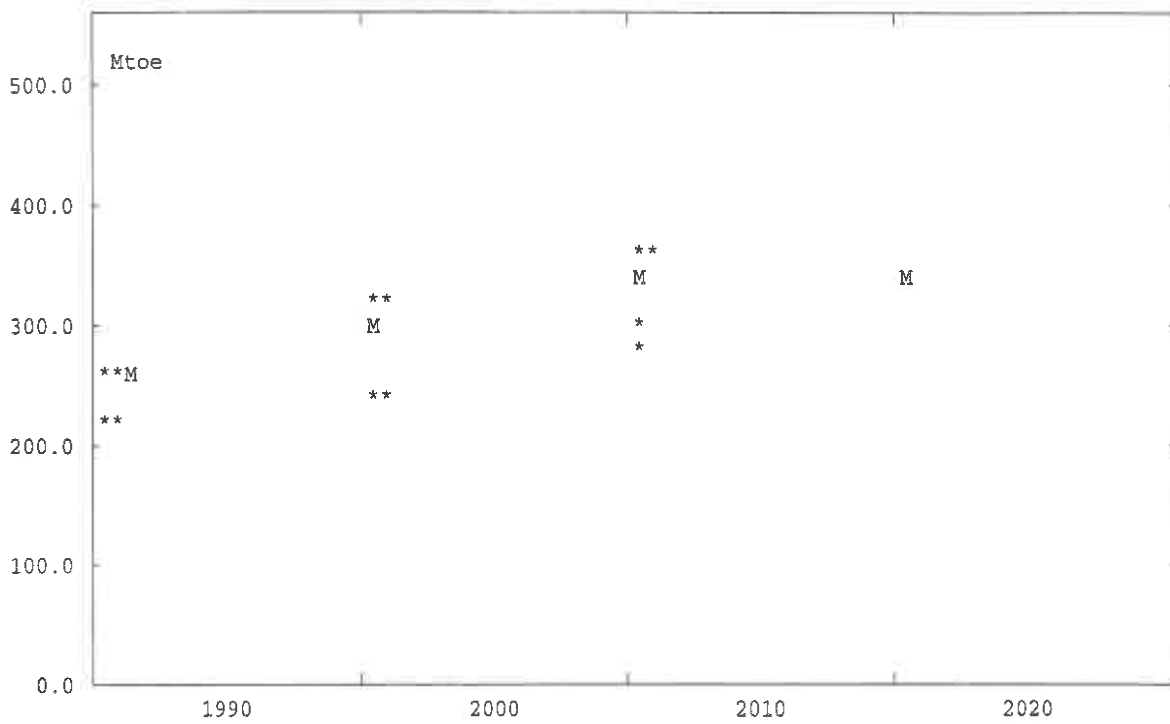


Real GNP (or GDP), Canada



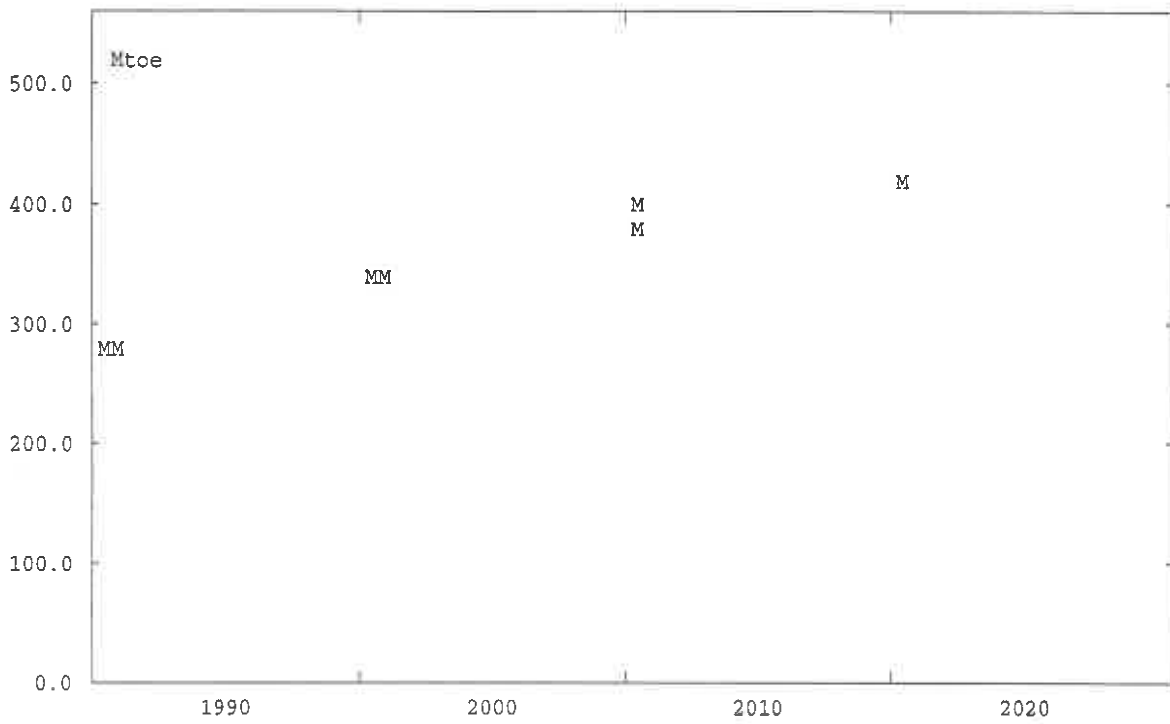
Medians:	1990	2000	2010	2020			
	100.0	124.0	159.0	203.0			
AMOCCH '93	100.0	AMOCCH '93	130.0	AMOCCH '93	178.0	EMRH '93	203.0
AMOCL '93	100.0	EIA '95	125.0	AMOCL '93	166.0		
EMRH '93	100.0	AMOCL '93	124.0	EMRH '93	159.0		
EMRL '93	100.0	EMRH '93	124.0	EMRL '93	158.0		
EIA '95	100.0	EMRL '93	124.0	EIA '95	157.0		

Total PE Consumption, Canada



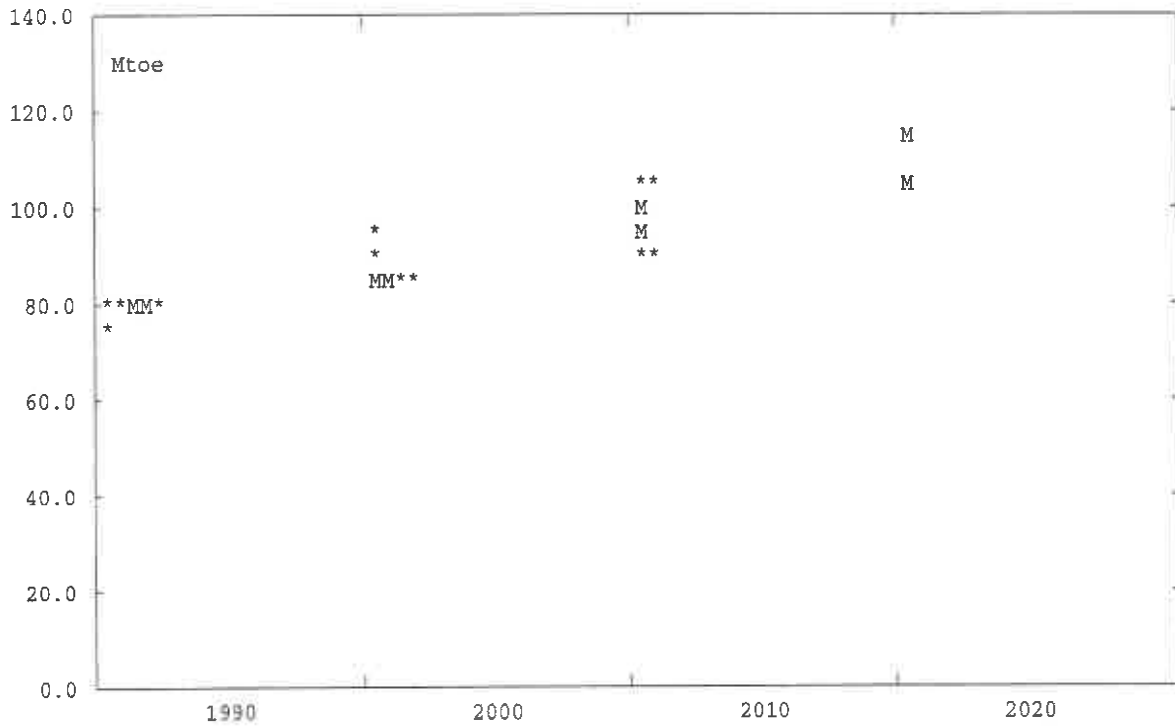
Medians:	252.0	295.0	341.0	344.2			
AMOCH '93	253.0	AMOCCH '93	319.0	AMOCCH '93	359.0	EMRH '93	344.2
AMOCCL '93	253.0	EIA '95	310.0	EIA '95	355.0		
EIA '95	252.0	AMOCCL '93	295.0	AMOCCL '93	341.0		
EMRH '93	210.7	EMRH '93	249.6	EMRH '93	291.4		
EMRL '93	210.7	EMRL '93	249.6	EMRL '93	280.3		

Total PE Production, Canada



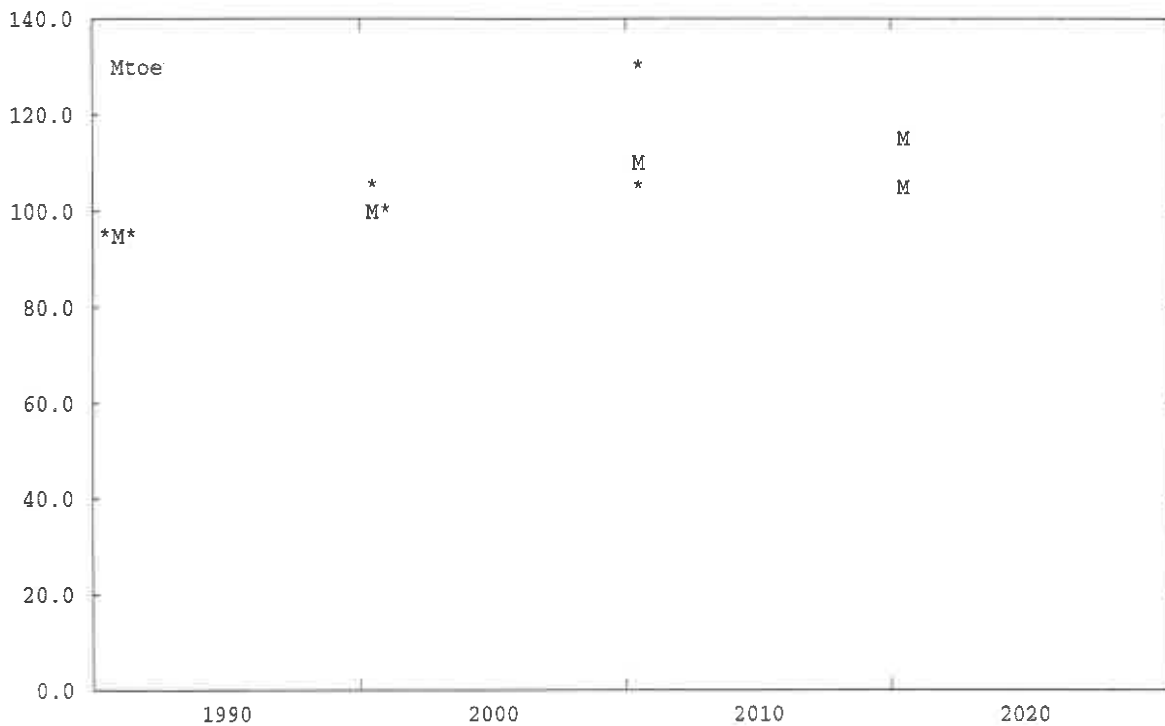
Medians:	275.0		345.7		390.0		415.2
EMRH '93	275.0	EMRH '93	345.7	EMRL '93	403.6	EMRH '93	415.2
EMRL '93	275.0	EMRL '93	345.7	EMRH '93	376.3		

Oil Consumption, Canada



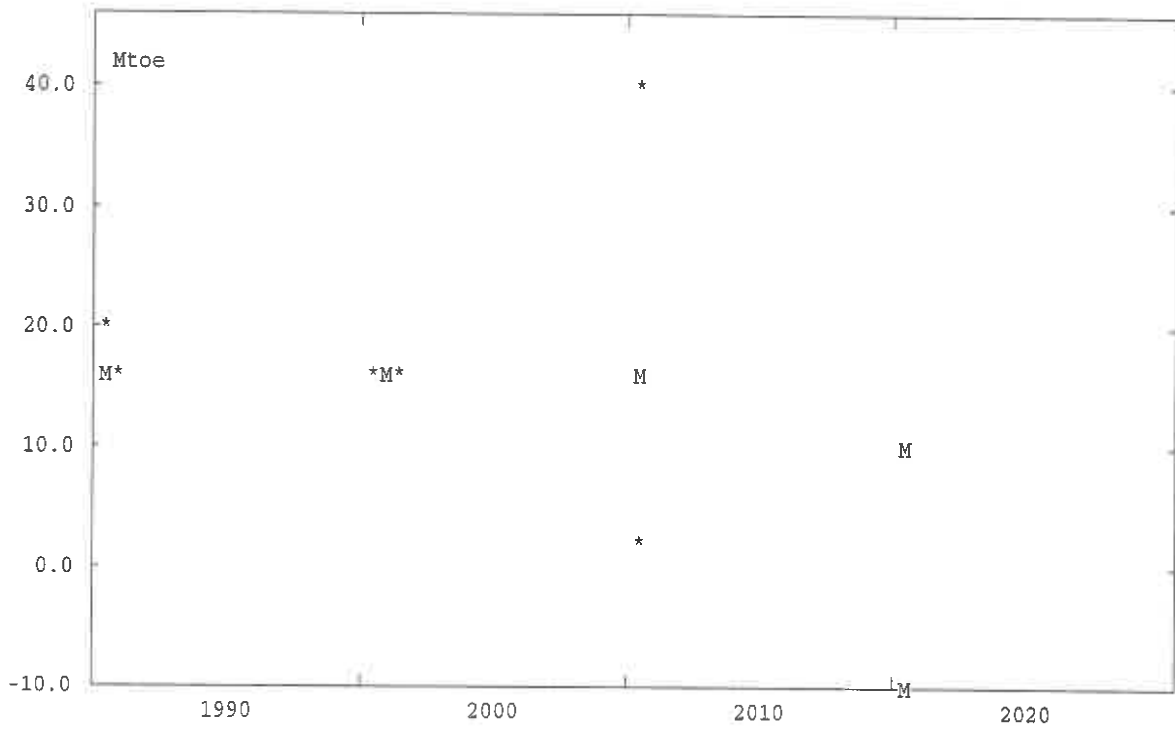
Medians:	1990	2000	2010	2020			
EIA '95	80.0	AMOCH'93	95.0	AMOCH'93	105.0	EMRH '93	116.6
AMOCH'93	78.0	AMOCL'93	89.0	EMRH '93	104.0	LYNCH'94	105.9
AMOCL'93	78.0	EMRH '93	86.9	AMOCL'93	99.0		
EMRH '93	77.6	EMRL '93	86.9	LYNCH'94	95.9		
EMRL '93	77.6	LYNCH'94	86.8	EMRL '93	90.5		
LYNCH'94	74.8	EIA '95	85.0	EIA '95	89.0		

Oil Production, Canada



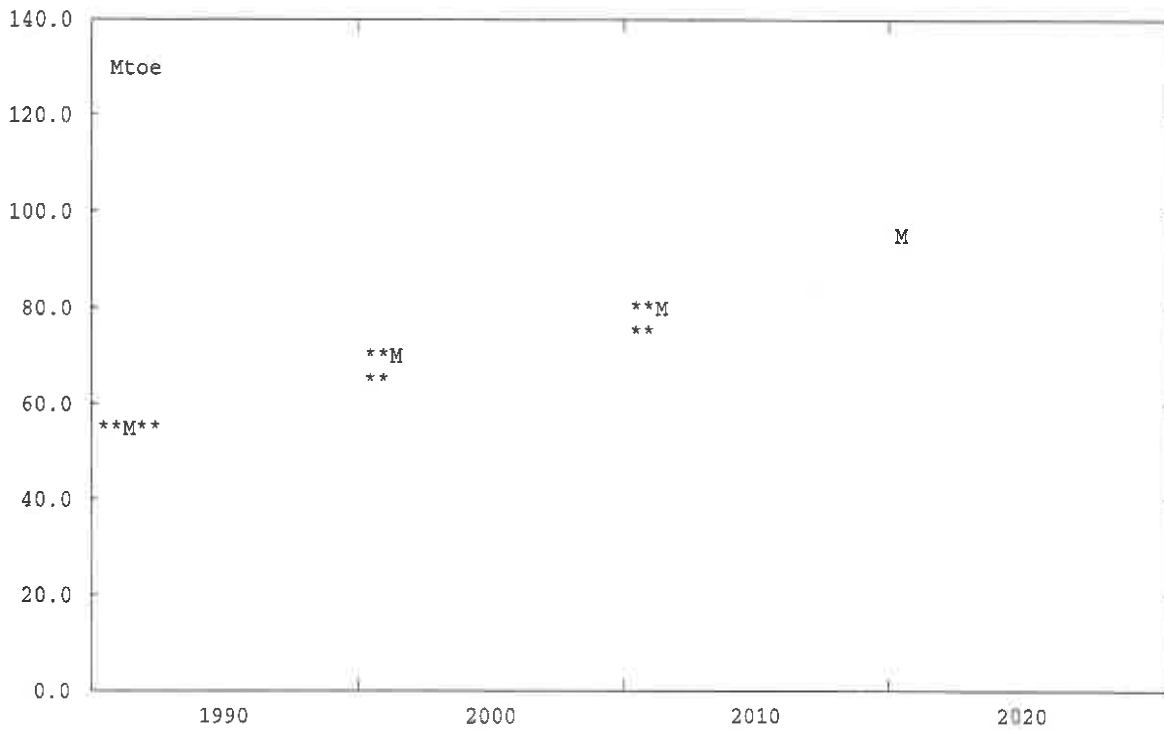
Medians:	94.7	102.0	111.1	111.6
EMRH '93	94.7	103.1	130.2	116.7
EMRL '93	94.7	102.0	111.1	106.6
LYNCH'94	93.9	102.0	106.6	

Oil Exports - Imports, Canada



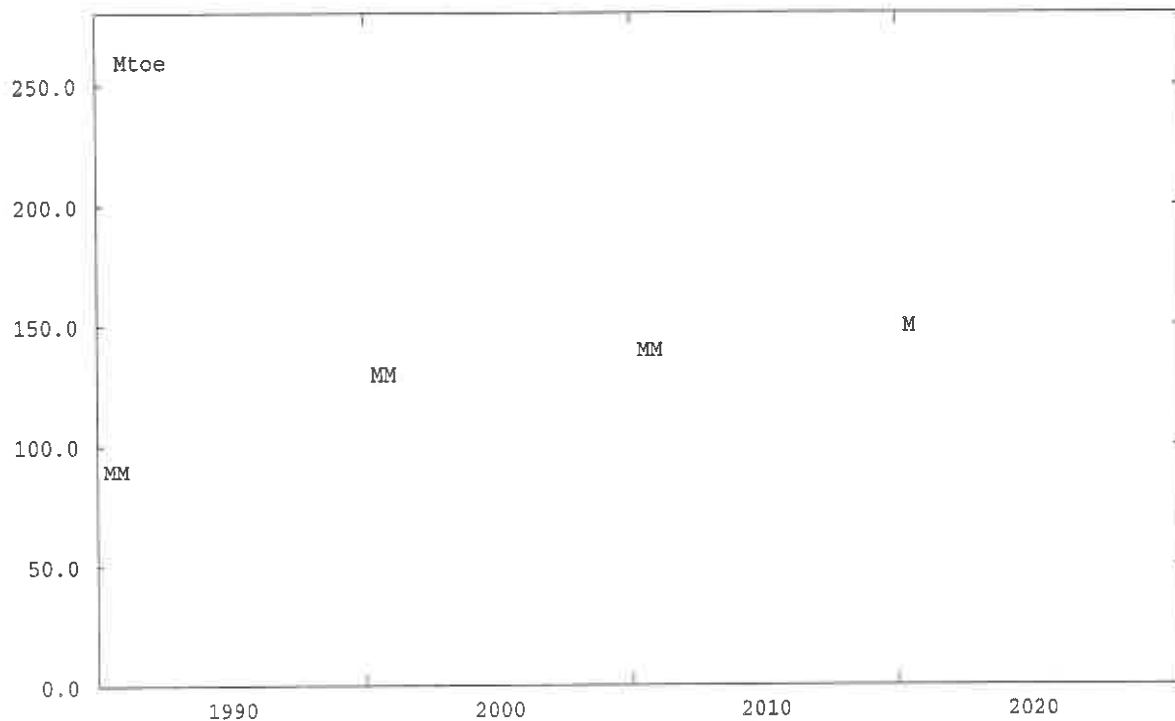
	1990	2000	2010	2020
Medians:	15.6	15.1	15.2	0.1
LYNCH '94	19.1	16.3	39.7	10.8
EMRH '93	15.6	15.1	15.2	-10.6
EMRL '93	15.6	15.1	2.6	

Natural Gas Consumption, Canada



Medians:	56.0	68.0	78.0	93.1
AMOCH'93	56.0	70.8	81.7	93.1
AMOCL'93	56.0	70.8	79.8	
EIA '95	56.0	68.0	78.0	
EMRH '93	55.5	67.0	73.0	
EMRL '93	55.5	63.0	73.0	

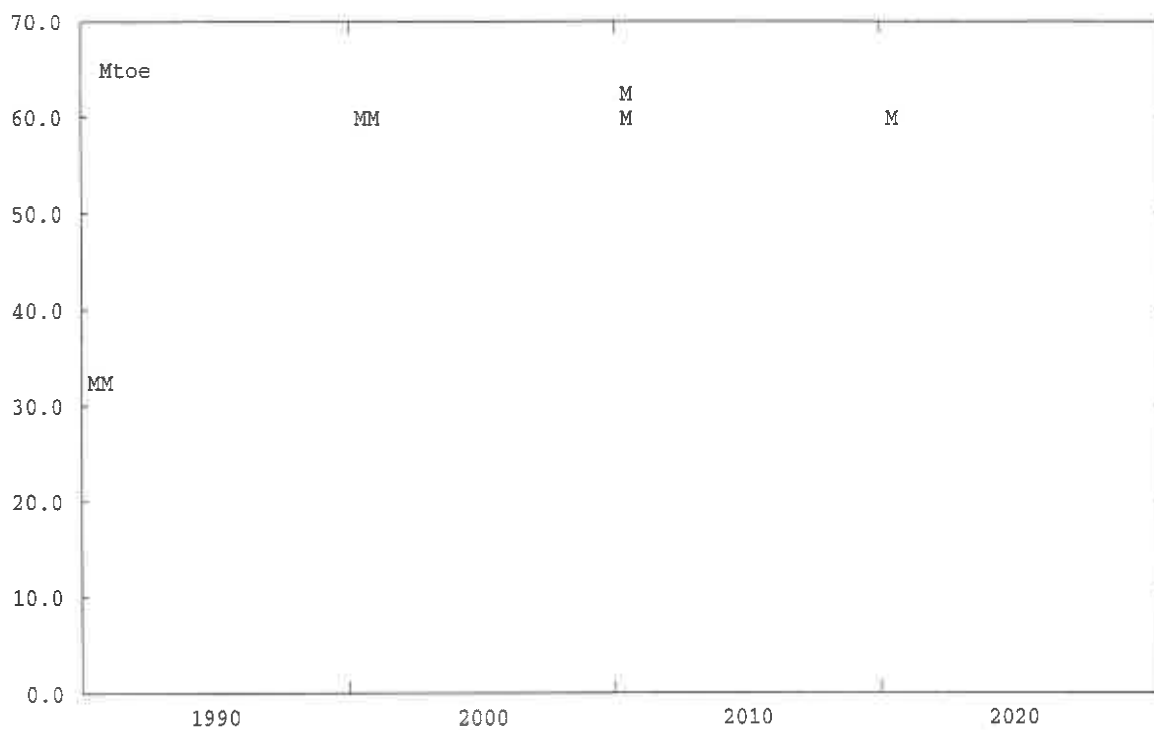
Natural Gas Production, Canada



Medians:	89.3	131.0	142.0	153.3			
EMRH '93	89.3	EMRH '93	131.0	EMRH '93	142.9	EMRH '93	153.3
EMRL '93	89.3	EMRL '93	131.0	EMRL '93	141.1		



Natural Gas Exports - Imports, Canada



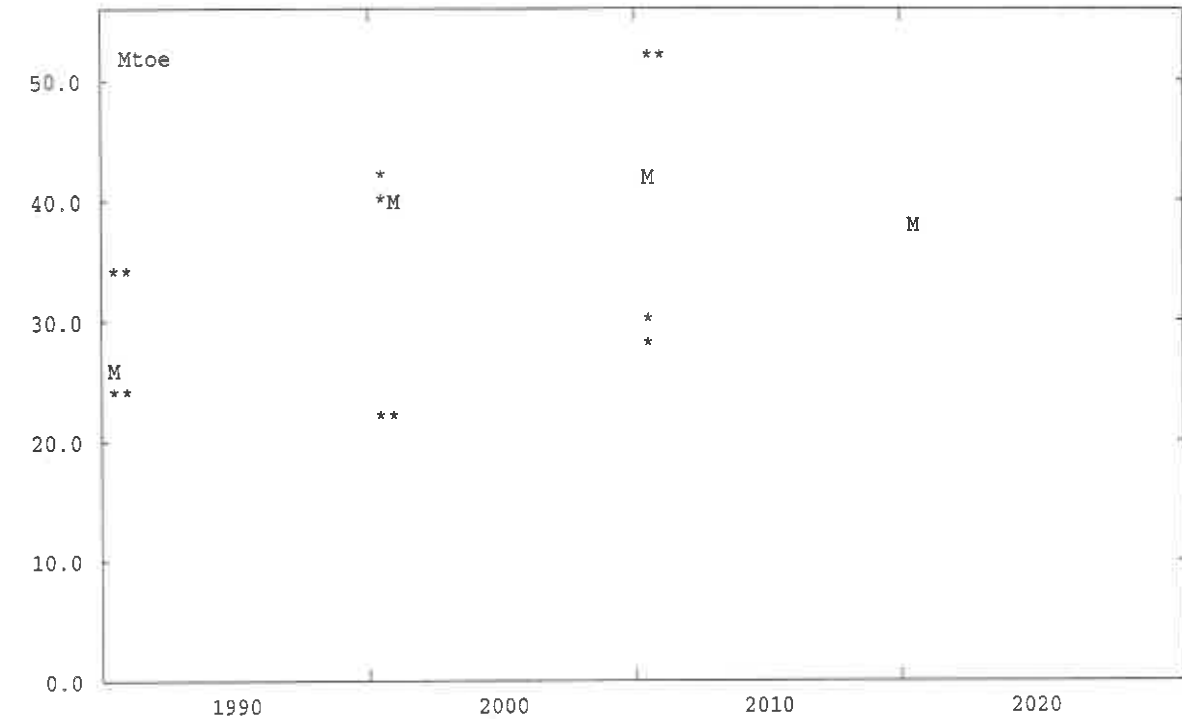
Medians:

1990	2000	2010	2020
32.5	60.2	61.2	60.2

EMRH '93  
EMRL '93

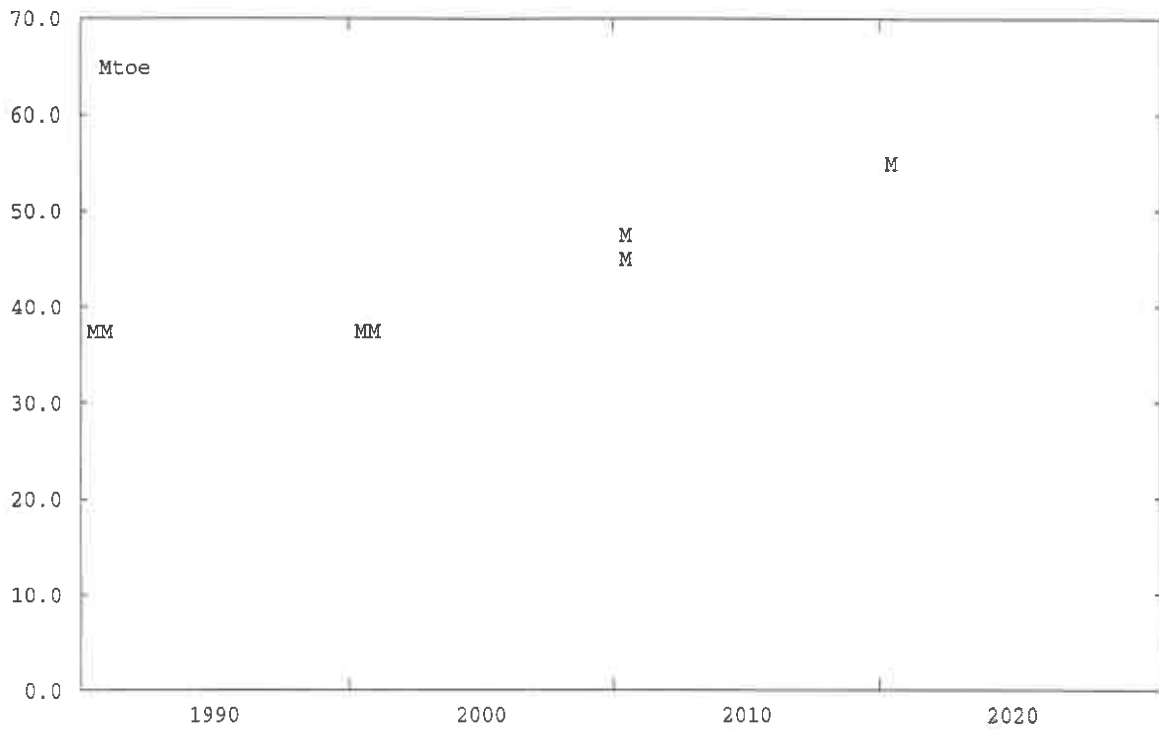
32.5	60.2	61.3	60.2
EMRH '93	EMRL '93	EMRH '93	
32.5	60.2	61.2	
EMRL '93	EMRH '93		

Coal Consumption, Canada



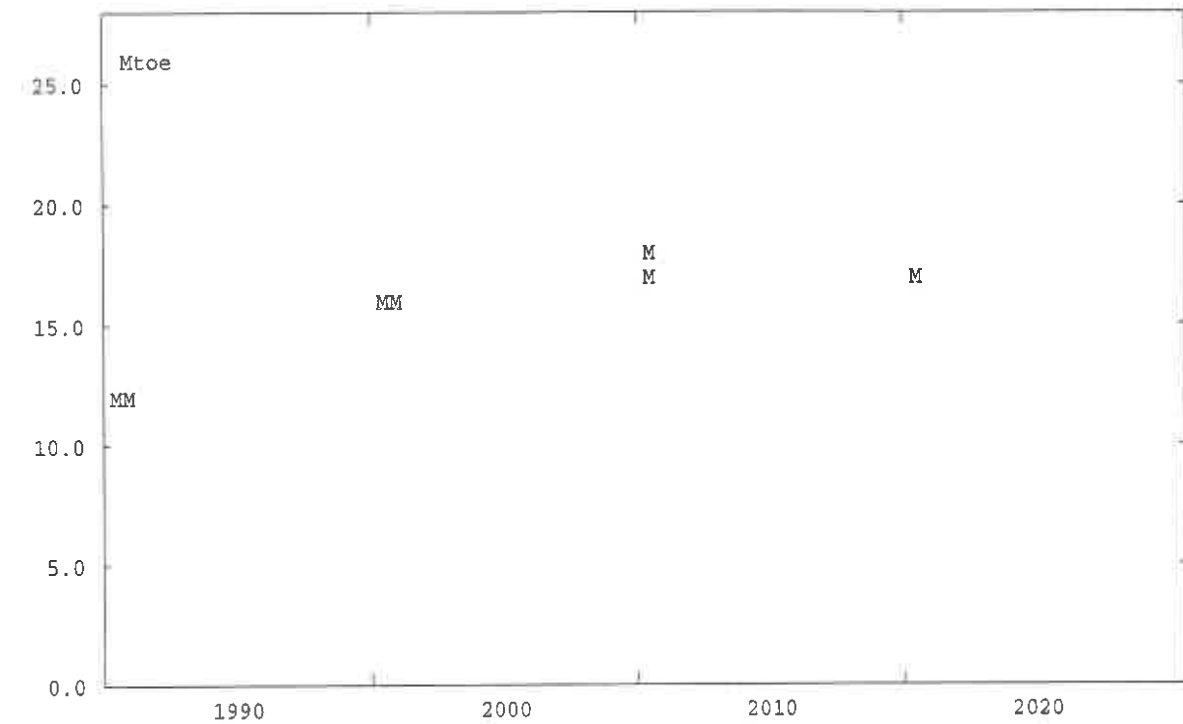
Medians:	26.0	39.0	42.0	38.3
AMOCH '93	33.0	42.0	52.0	38.3
AMOCL '93	33.0	40.0	52.0	
EIA '95	26.0	39.0	42.0	
EMRH '93	24.5	22.1	29.9	
EMRL '93	24.5	22.1	28.0	

Coal Production, Canada



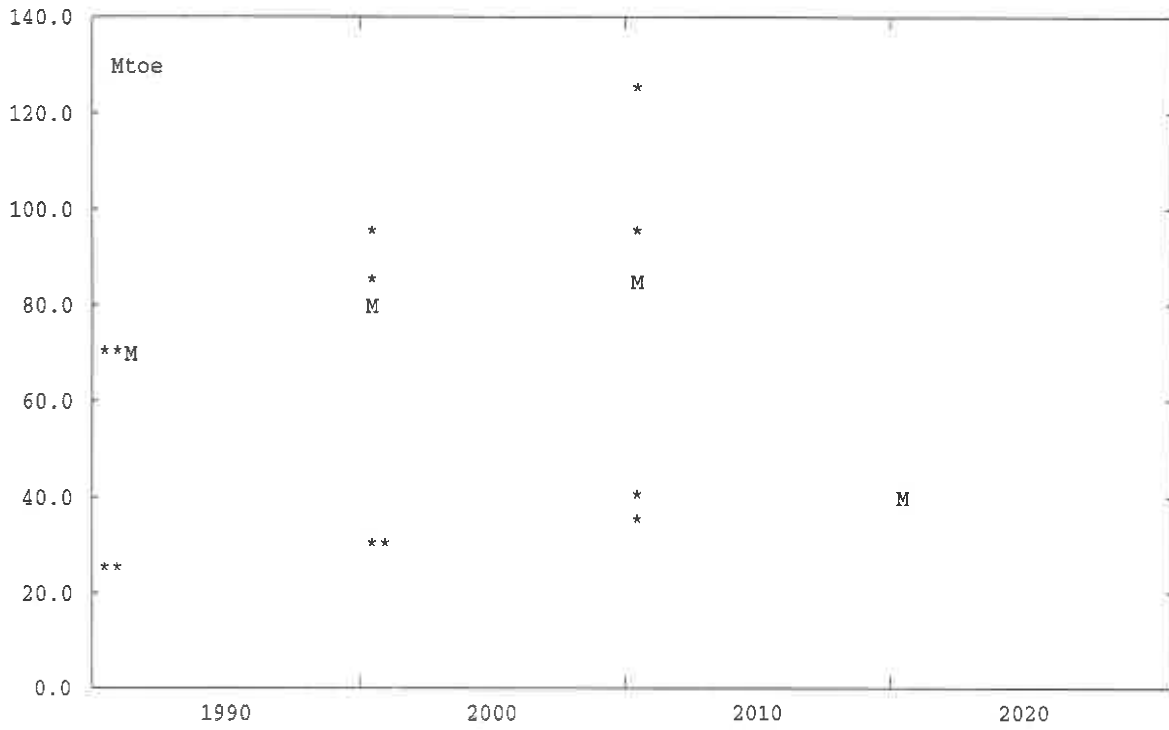
Medians:	37.9		38.5		46.7		55.7
EMRH '93	37.9	EMRH '93	38.5	EMRL '93	48.2	EMRH '93	55.7
EMRL '93	37.9	EMRL '93	38.5	EMRH '93	45.2		

Coal Exports - Imports, Canada



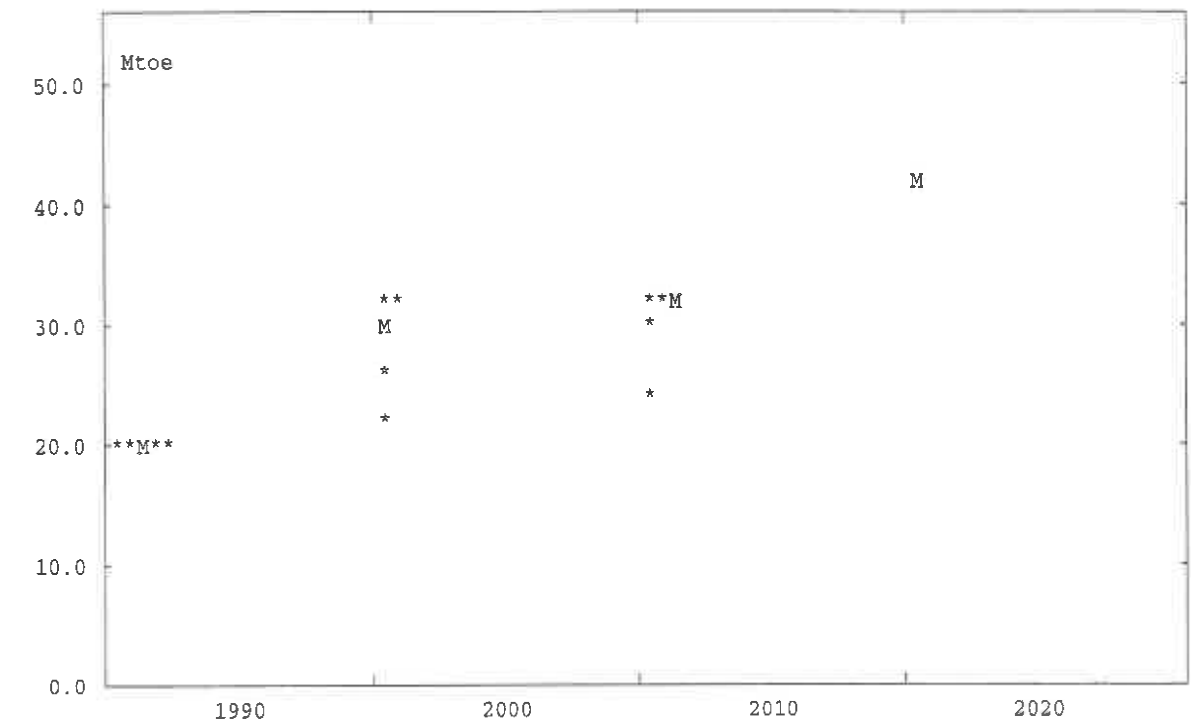
Medians:	11.7	16.4	17.8	17.4
EMRH '93	11.7	16.4	18.3	17.4
EMRL '93	11.7	16.4	17.2	

Renewables, Electric, Canada



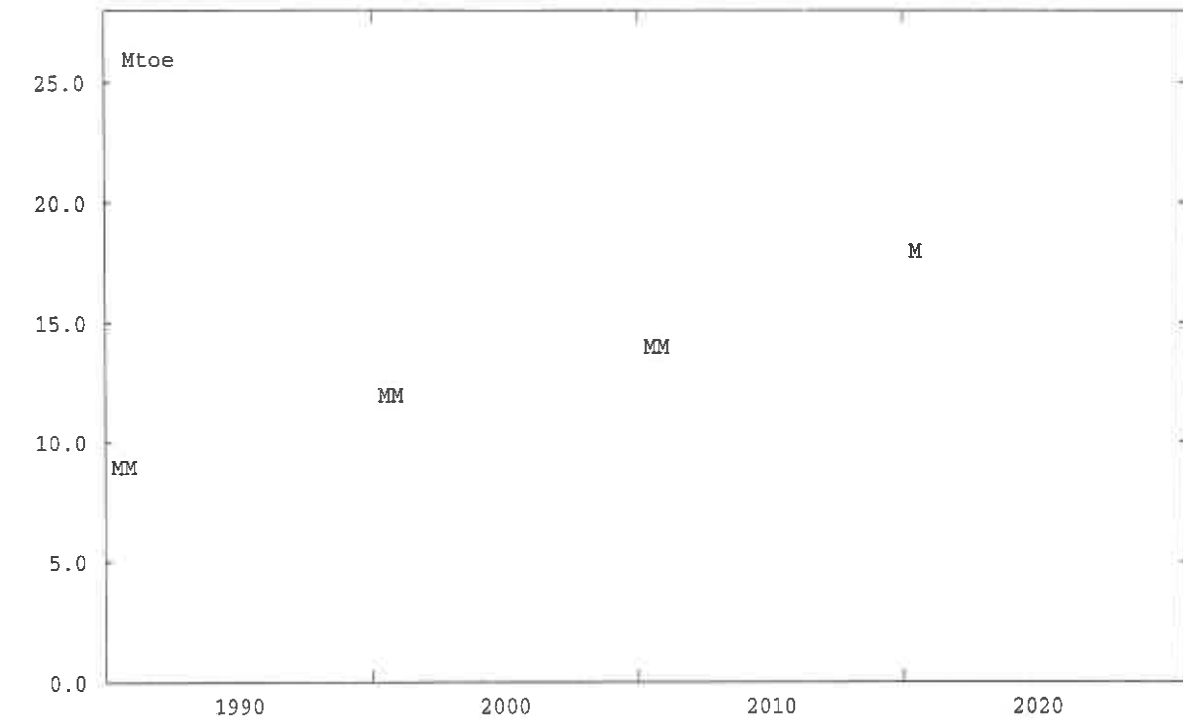
Medians:	1990	2000	2010	2020
EIA '95	71.0	96.0	125.0	40.9
AMOCCH '93	68.0	85.0	93.0	
AMOCL '93	68.0	79.0	87.0	
EMRH '93	25.5	30.8	37.7	
EMRL '93	25.5	30.8	36.7	

Nuclear Energy, Canada



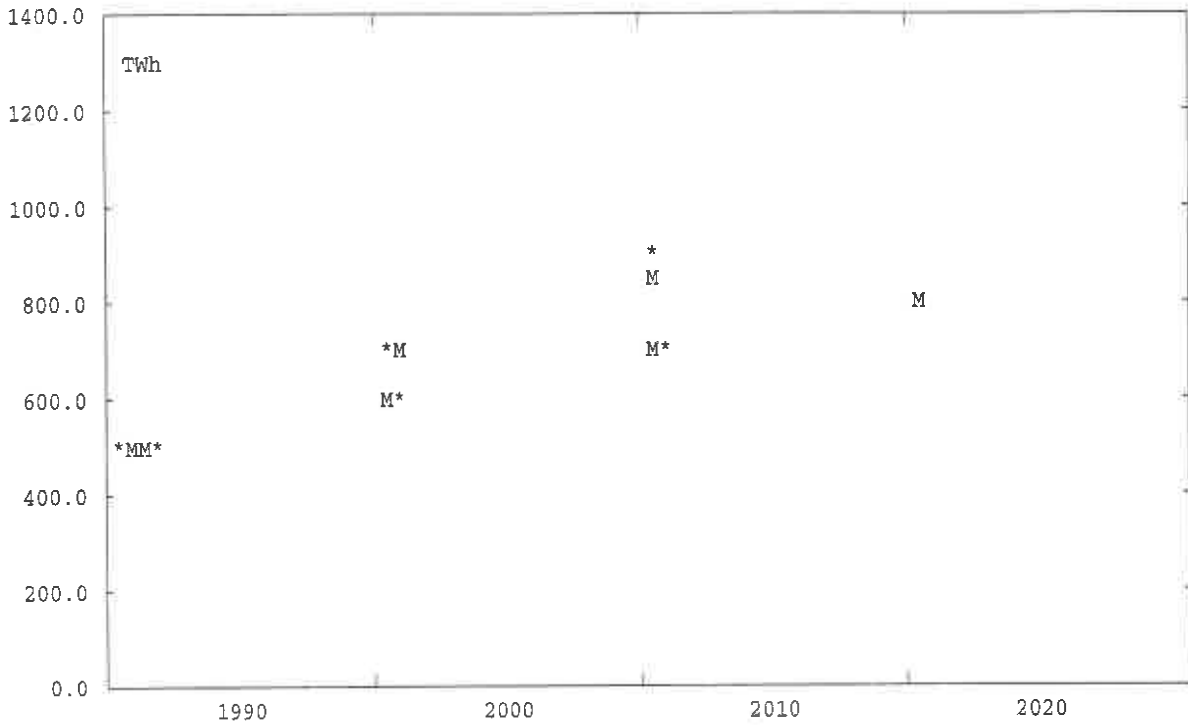
Medians:	19.0	30.0	31.0	41.4
AMOCH '93	19.0	31.3	32.2	41.4
AMOCL '93	19.0	31.3	32.0	
EMRH '93	19.0	30.0	31.0	
EMRL '93	19.0	25.0	30.9	
EIA '95	19.0	21.0	24.0	

Renewables, Nonelectric, Canada



Medians:	8.5	12.0	14.1	17.9
EMRH '93	8.5	EMRH '93 12.0	EMRL '93 14.2	EMRH '93 17.9
EMRL '93	8.5	EMRL '93 12.0	EMRH '93 14.0	

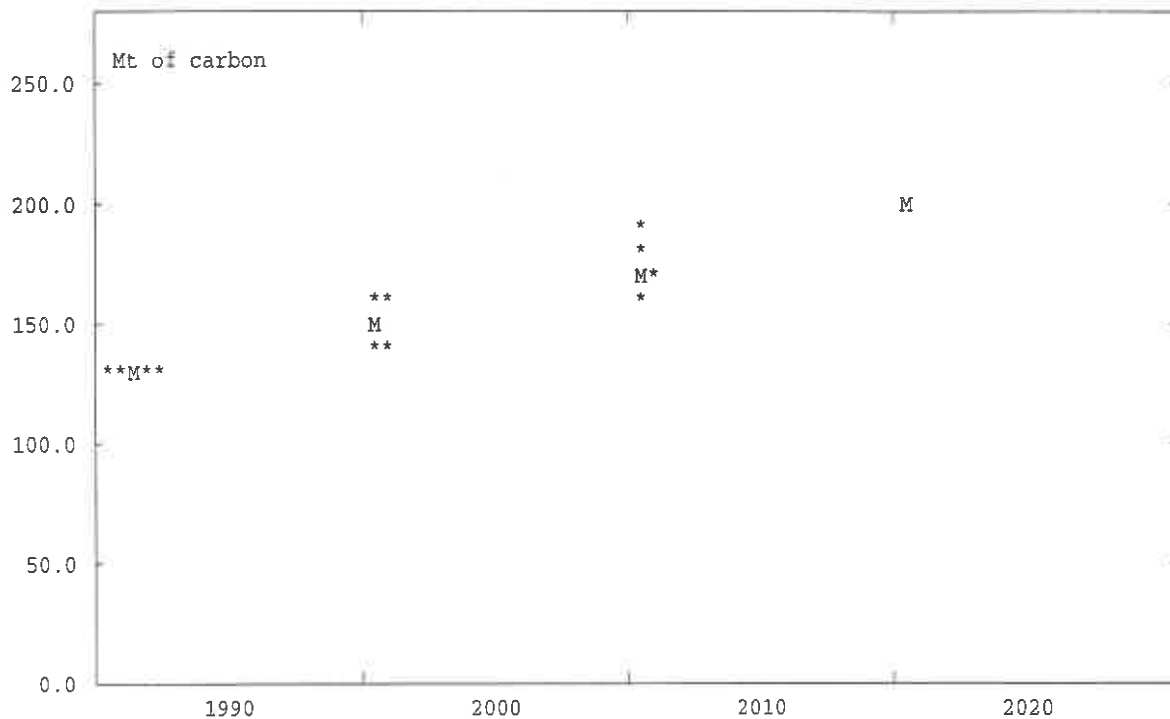
Electricity Generation, Canada



Medians:	482.0	648.0	785.3	809.8			
AMOCCH '93	482.0	AMOCCH '93	720.0	AMOCCH '93	900.0	EMRH '93	809.8
AMOCL '93	482.0	AMOCL '93	700.0	AMOCL '93	850.0		
EMRH '93	481.9	EMRH '93	596.0	EMRL '93	720.7		
EMRL '93	481.9	EMRL '93	596.0	EMRH '93	693.4		

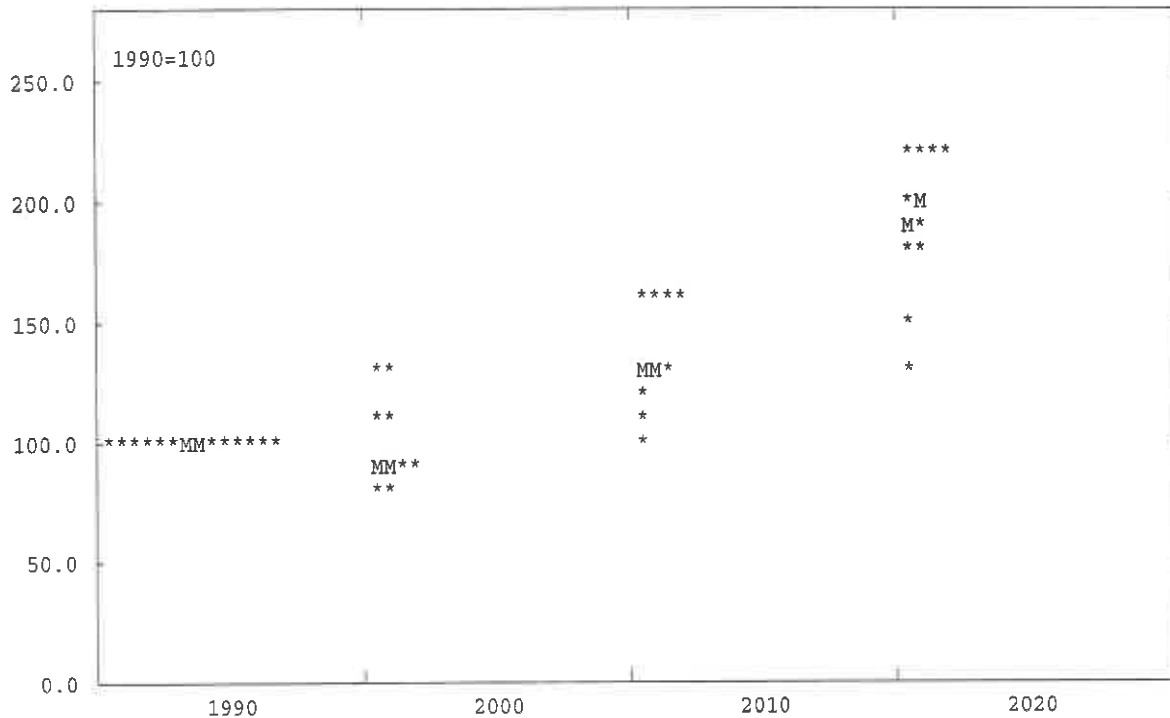


Carbon Emissions, Canada



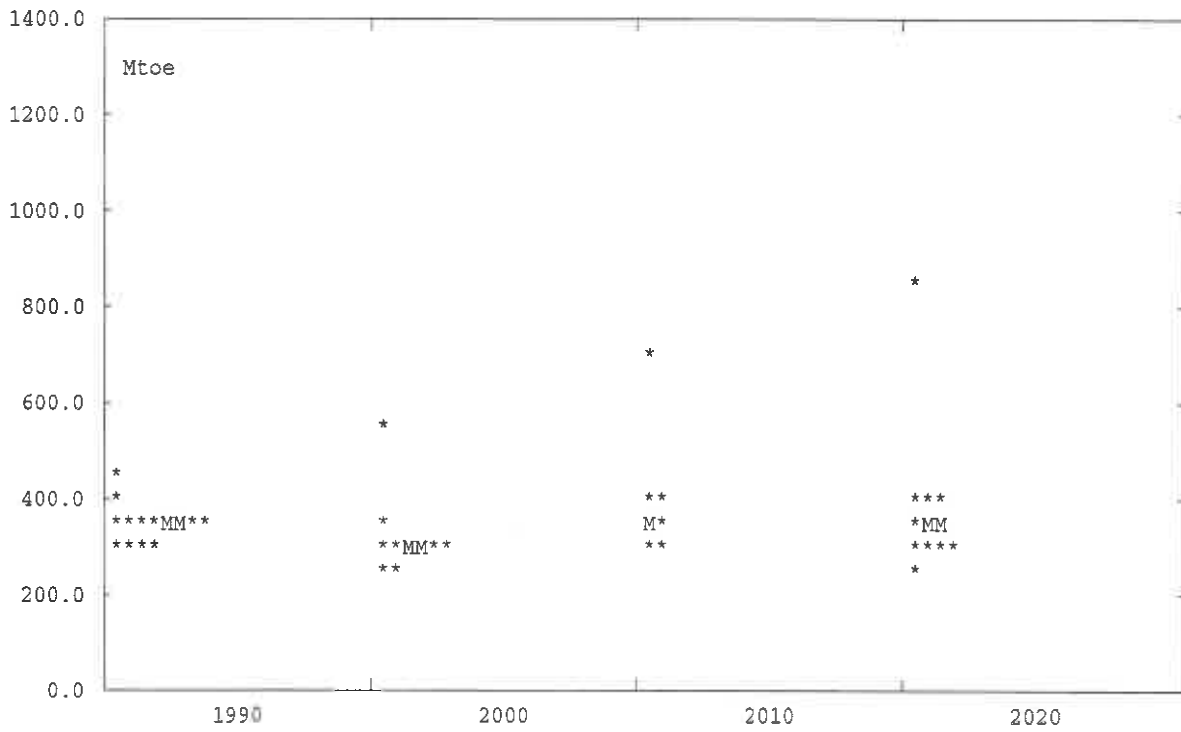
Medians:	130.0	150.0	168.0	195.0
AMOCCH '93	130.0	160.0	185.0	195.0
AMOCL '93	130.0	157.0	177.0	
EIA '95	130.0	150.0	168.0	
EMRH '93	126.0	139.0	166.0	
EMRL '93	126.0	139.0	155.0	

Real GNP (or GDP), Eastern Europe



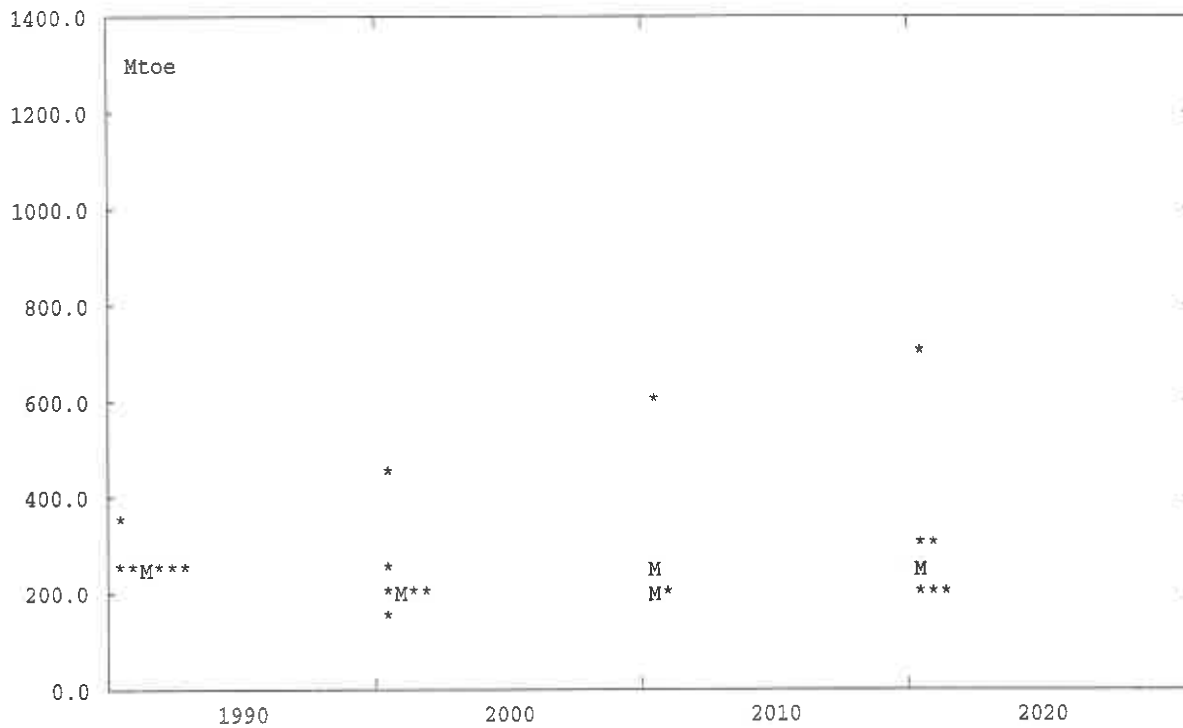
Medians:	1990	2000	2010	2020
ECSE '95	100.0	130.2	160.0	222.4
ECSC '95	100.0	125.5	157.3	222.4
ECSA '95	100.0	109.0	156.0	222.4
GRREF '93	100.0	108.0	155.6	222.4
IEA '94	100.0	90.0	130.0	199.0
ISPRE '95	100.0	90.0	127.0	198.3
ISREF '95	100.0	90.0	127.0	190.0
ISUNF '95	100.0	86.2	115.2	185.0
ITREF '93	100.0	81.8	108.8	177.0
EIA '95	100.0	77.7	97.3	177.0
WECA '93	100.0			148.0
WECB '93	100.0			131.1
WECB1 '93	100.0			
WECC '93	100.0			

Total PE Consumption, Eastern Europe



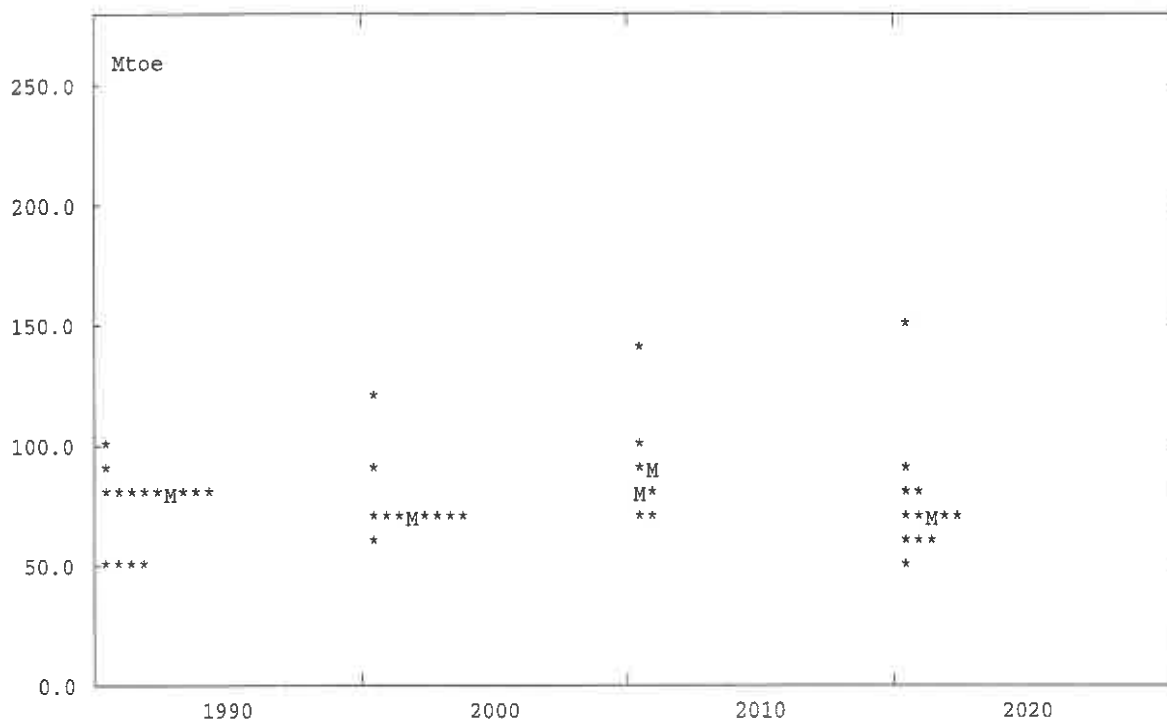
Medians:	1990	2000	2010	2020
GRREF'93	432.6	537.2	686.6	826.0
EIA '95	383.0	332.0	381.0	415.3
ECSC '95	336.7	322.1	381.0	411.0
ECSA '95	336.7	317.3	358.0	389.0
ECSB '95	336.7	292.0	329.7	366.5
ISUNF'95	336.0	290.0	300.0	355.0
ISPRE'95	336.0	288.0	295.0	355.0
ISREF'95	336.0	285.0		323.0
ITREF'93	332.4	274.0		314.0
IEA '94	332.0	273.0		308.1
WECA '93	288.0			291.0
WECSB '93	288.0			262.0
WECCB1'93	288.0			
WECC '93	288.0			

Total PE Production, Eastern Europe



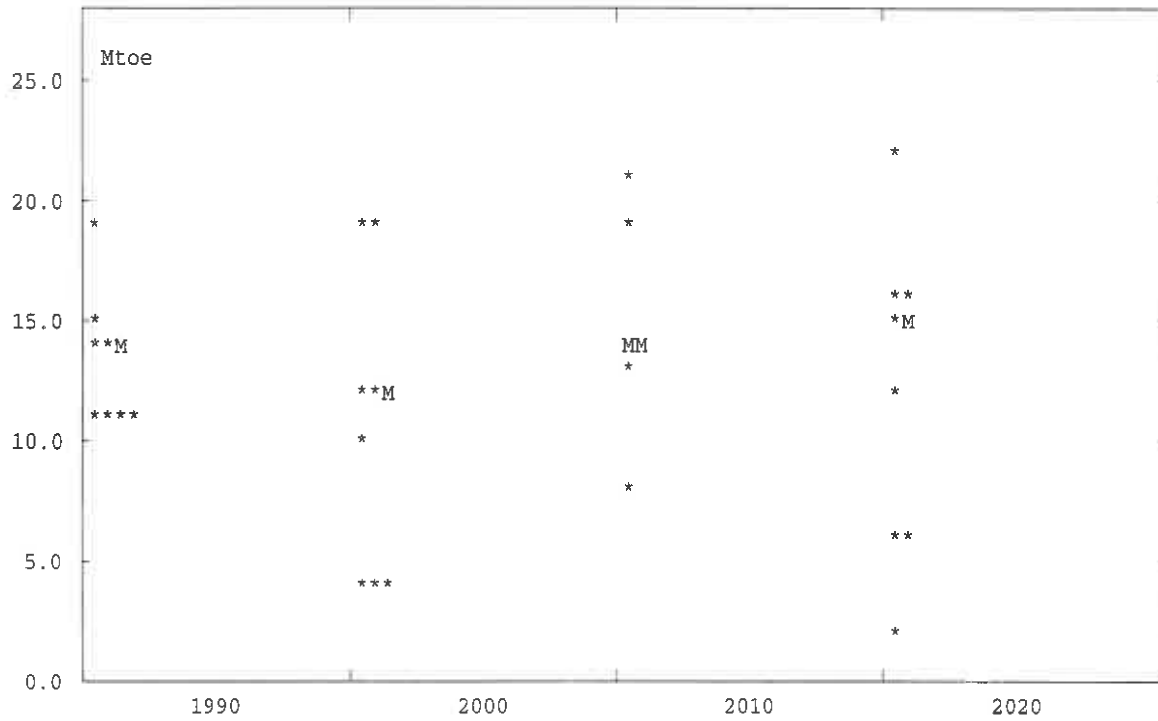
Medians:	1990	2000	2010	2020
GRREF '93	350.7	439.0	577.6	713.5
ECSB '95	240.6	238.1	252.3	299.0
ECSA '95	240.6	200.9	202.5	276.0
ECSC '95	240.6	192.2	189.2	266.0
ISUNF '95	238.7	179.0		217.1
ISPRE '95	238.7	175.0		191.6
ISREF '95	238.7	165.0		178.0

Oil Consumption, Eastern Europe



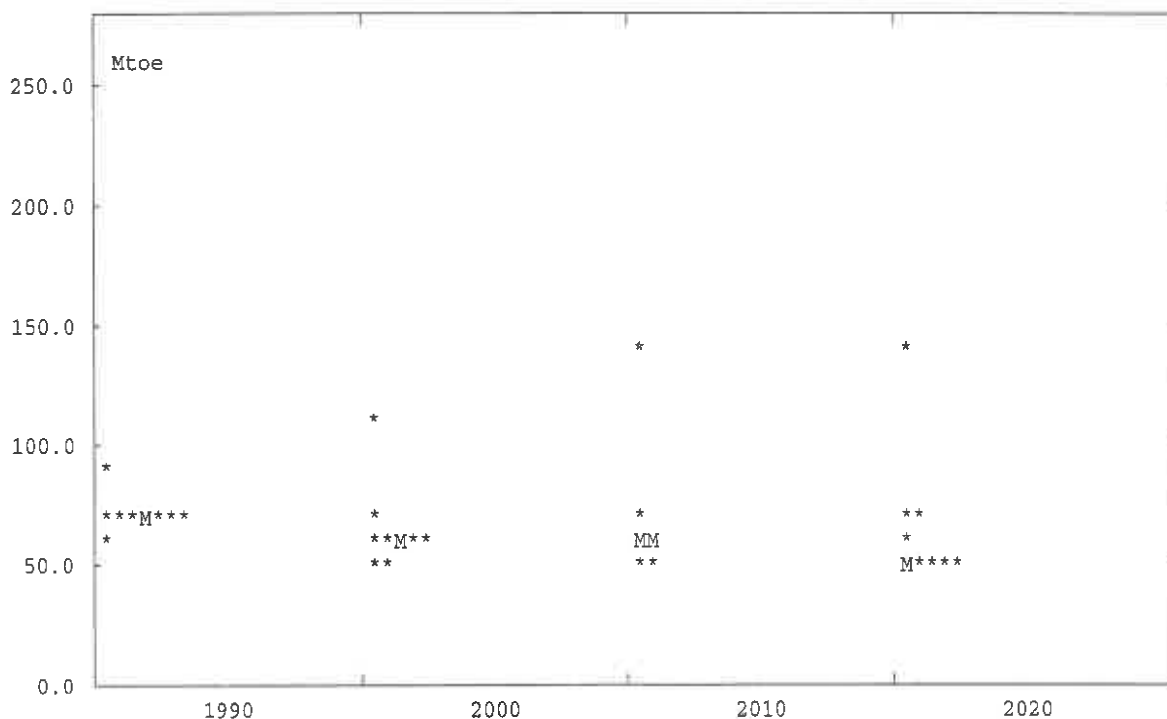
Medians:	1990	2000	2010	2020
GRREF '93	98.1	120.4	144.1	148.0
ITREF '93	86.9	94.0	103.0	87.5
EIA '95	82.0	74.0	88.8	83.3
IEA '94	80.0	73.0	85.0	78.0
LYNCH '94	79.4	68.3	75.4	73.1
ISREF '95	78.8	67.4	75.0	71.0
ISPRE '95	78.8	67.2	69.8	70.2
ISUNF '95	78.8	66.0	68.2	67.0
ECSB '95	78.7	66.0		66.1
ECSC '95	78.7	66.0		62.0
ECSA '95	78.7	59.9		59.0
WECA '93	49.0			56.0
WECEB '93	49.0			52.0
WECEB1 '93	49.0			
WECC '93	49.0			

Oil Production, Eastern Europe



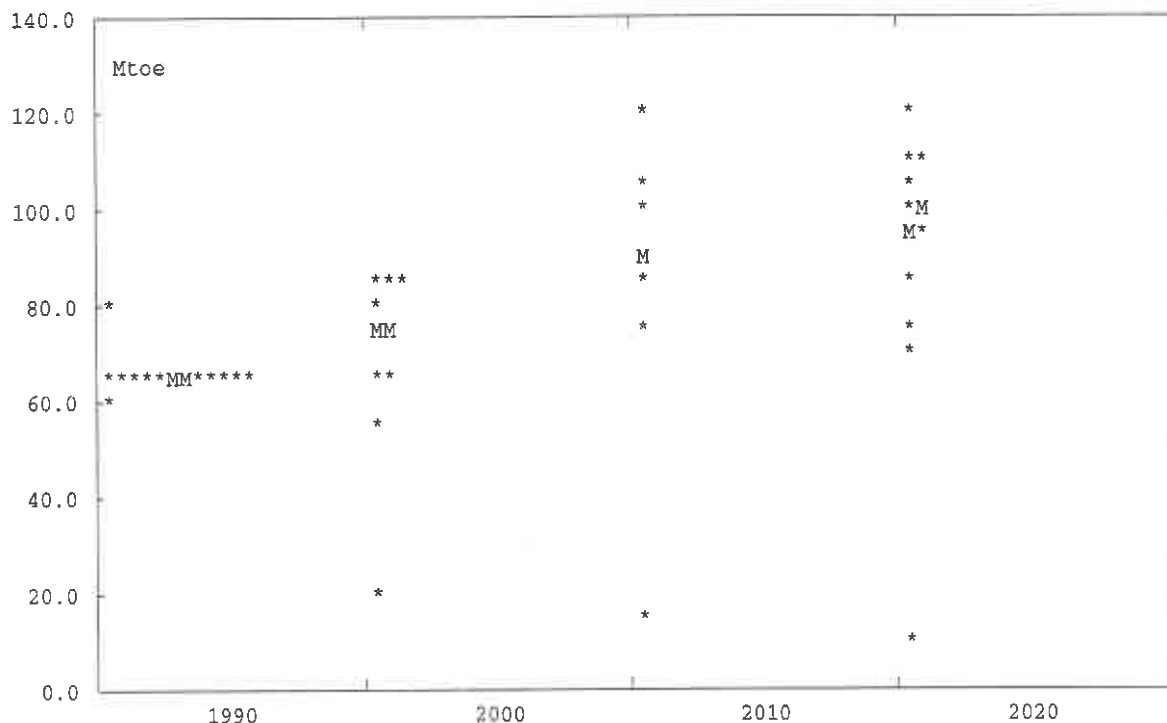
Medians:	1990	2000	2010	2020
ITREF'93	18.8	19.4	21.1	22.1
LYNCH'94	14.9	19.1	19.2	15.9
ECSB '95	13.6	11.8	13.6	15.7
ECSA '95	13.6	11.8	13.6	14.9
ECSC '95	13.6	11.8	13.3	14.6
GRREF'93	11.4	9.9	8.0	12.0
ISUNF'95	10.8	4.0		6.5
ISPRE'95	10.8	4.0		6.0
ISREF'95	10.8	4.0		2.0

Oil Imports - Exports, Eastern Europe



Medians:	1990	2000	2010	2020
GRREF '93	86.6	110.5	136.1	141.6
ITREF '93	68.2	74.6	69.7	67.6
ISUNF '95	68.0	62.0	61.7	65.4
ISREF '95	68.0	62.0	56.2	58.4
ISPRE '95	68.0	62.0	54.5	54.3
ECSB '95	66.0	55.7	54.3	51.2
ECSC '95	66.0	55.5		50.0
ECSA '95	66.0	49.2		50.0
LYNCH '94	64.5	48.2		50.0

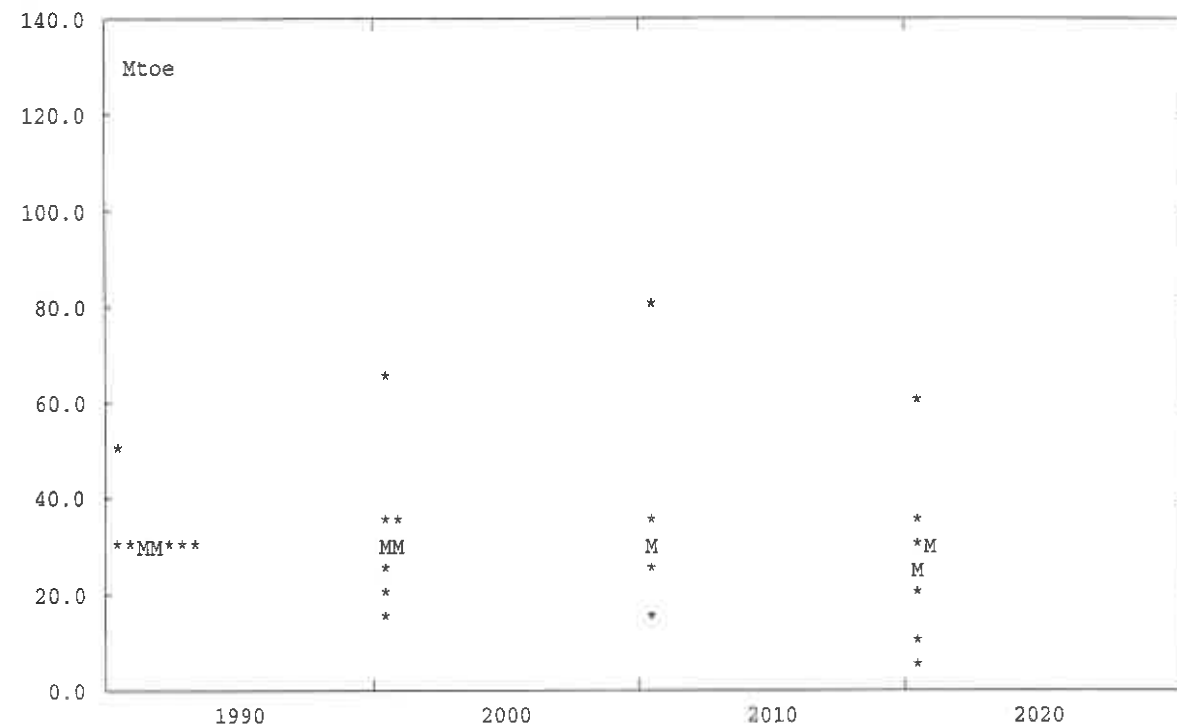
Natural Gas Consumption, Eastern Europe



Medians:	1990	2000	2010	2020
EIA '95	80.0	86.0	118.0	118.0
IEA '94	67.0	85.0	105.1	110.5
GRREF'93	66.6	84.1	98.0	110.0
ISREF'95	66.4	81.0	88.7	105.0
ISPREF'95	66.4	75.4	83.0	102.0
ISUNF'95	66.4	72.8	74.2	98.7
ECSC '95	66.4	66.0	13.3	97.0
ECSE '95	66.4	65.0		97.0
ECSA '95	66.4	56.4		84.9
WECEB '93	64.0	20.3		76.0
WECA '93	64.0			71.0
WECB1'93	64.0			8.6
WECC '93	64.0			
ITREF'93	61.1			

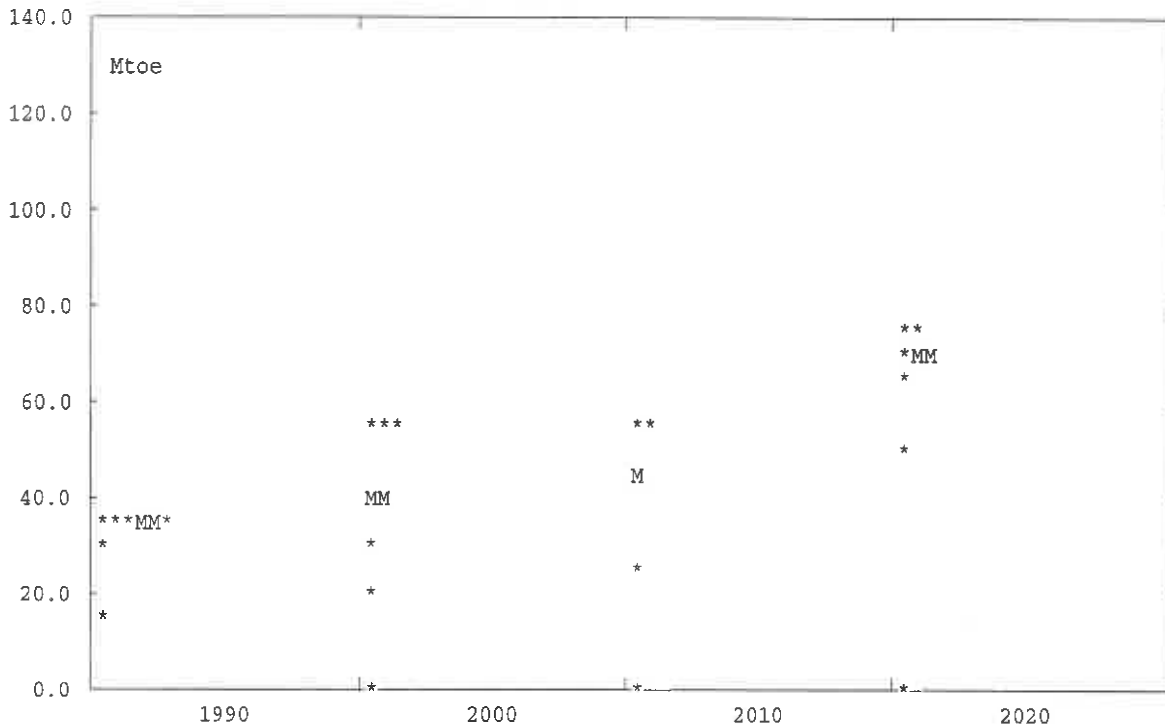


Natural Gas Production, Eastern Europe



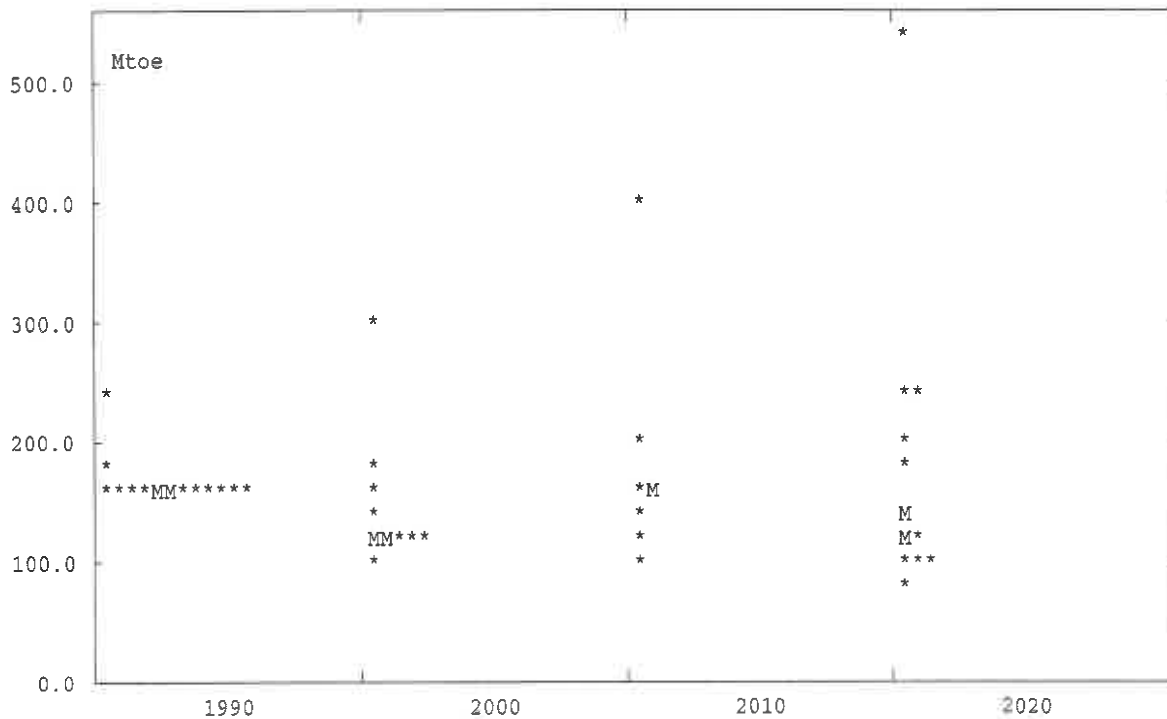
Medians:	1990	2000	2010	2020
GRREF'93	51.5	64.8	78.6	60.8
ECSB '95	30.8	35.8	33.2	35.3
ECSC '95	30.8	33.0	27.5	29.0
ECSA '95	30.8	31.5	27.5	29.0
ISUNF'95	30.7	28.0	13.3	24.0
ISPRE'95	30.7	24.9		22.2
ISREF'95	30.7	20.3		8.6
ITREF'93	30.5	13.0		3.0

Natural Gas Imports - Exports, Eastern Europe



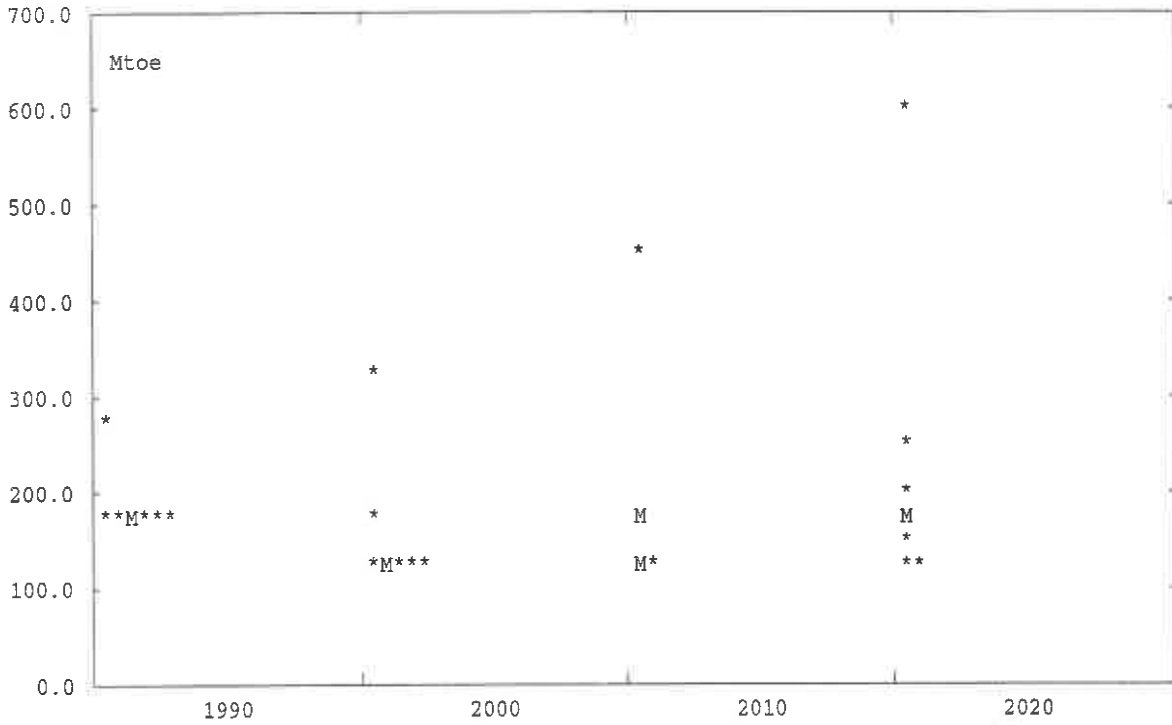
Medians:	1990	2000	2010	2020
ISUNF '95	35.7	53.0	55.6	74.7
ISREF '95	35.7	53.0	55.6	74.7
ISPRE '95	35.7	53.0	46.7	68.0
ECSC '95	35.6	41.3	26.5	68.0
ECSB '95	35.6	39.6	0.0	68.0
ECSA '95	35.6	31.5		62.8
ITREF '93	30.5	19.3		49.7
GRREF '93	15.1	0.0		0.0

Coal Consumption, Eastern Europe



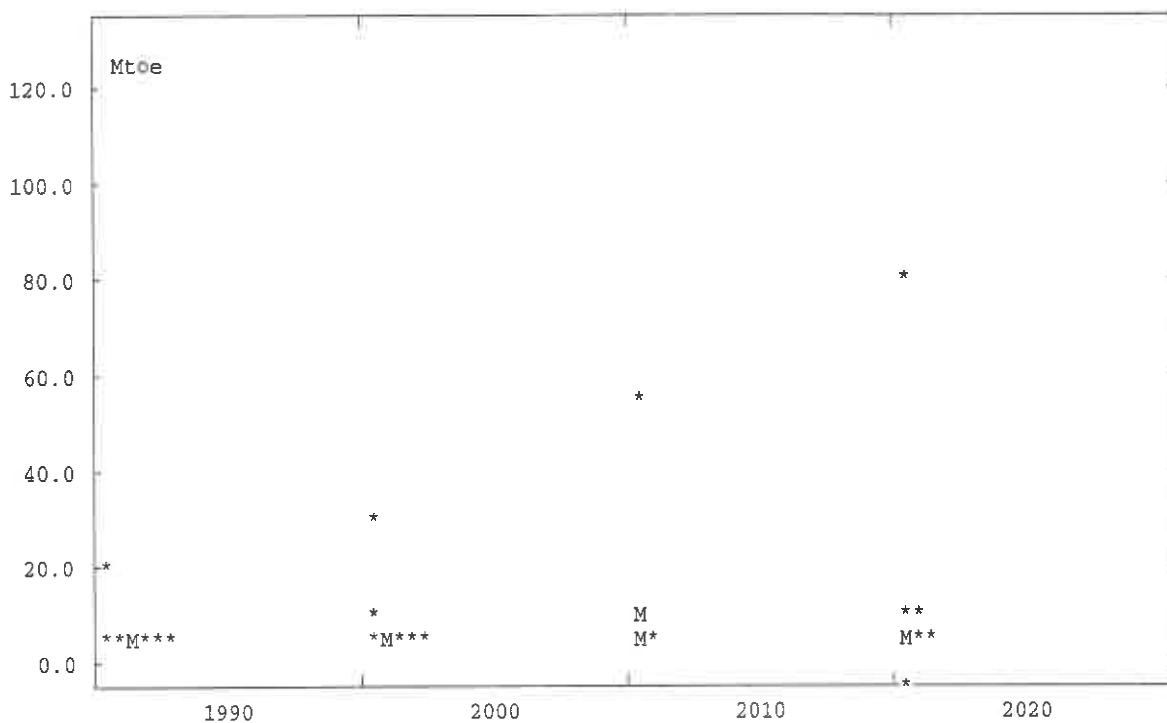
	1990	2000	2010	2020
Medians:	159.4	122.7	151.0	128.1
GRREF'93	244.6	305.5	406.7	530.3
EIA '95	188.0	179.3	207.5	244.2
IEA '94	160.0	161.0	165.9	233.0
ECSA '95	159.4	141.0	151.0	196.0
ECSC '95	159.4	124.0	132.0	183.0
ISPREF'95	159.4	121.4	119.9	130.2
ECSB '95	159.4	119.5	108.9	126.0
ISUNF'95	159.4	111.0		117.0
ISREF'95	159.4	110.0		108.0
ITREF'93	157.0	107.0		105.6
WECA '93	156.0			98.0
WECB '93	156.0			74.0
WECB1'93	156.0			
WECC '93	156.0			

Coal Production, Eastern Europe



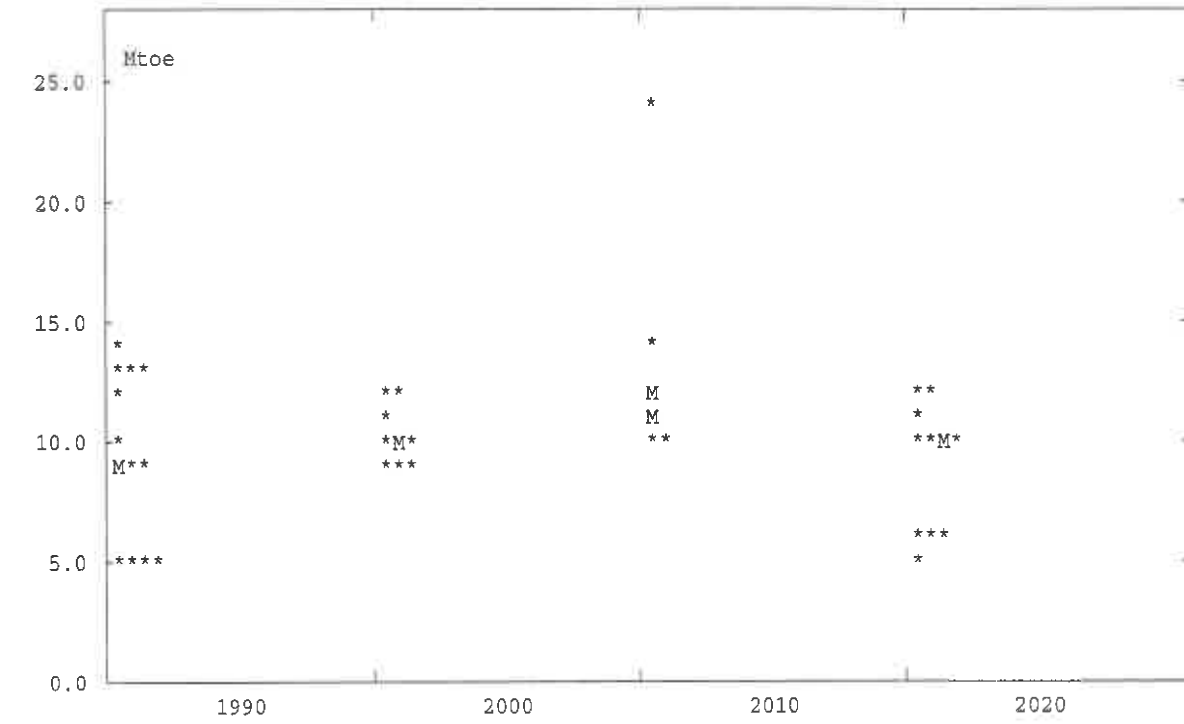
Medians:	1990	2000	2010	2020
GRREF'93	264.3	337.1	460.3	609.1
ECSB '95	165.9	168.0	172.9	239.0
ECSA '95	165.9	129.3	129.5	201.0
ECSC '95	165.9	126.9	116.3	176.4
ISUNF'95	165.8	117.0		141.9
ISPRE'95	165.8	116.0		131.0
ISREF'95	165.8	113.0		115.4

Coal Exports - Imports, Eastern Europe



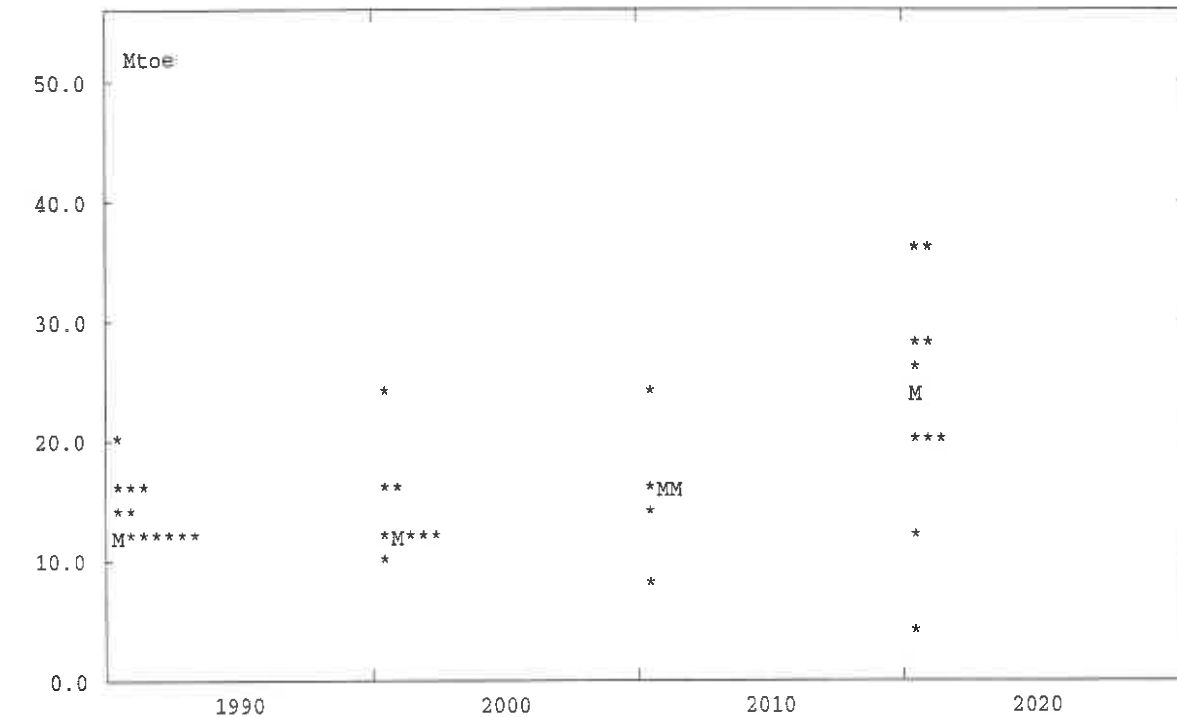
Medians:	1990	2000	2010	2020
GRREF '93	19.7	31.6	53.6	78.8
ECSB '95	6.5	7.9	9.6	11.7
ECSA '95	6.5	7.4	7.3	9.9
ECSC '95	6.5	7.0	7.0	6.0
ISUNF '95	6.4	6.0		6.0
ISPRE '95	6.4	6.0		6.0
ISREF '95	6.4	6.0		-6.5

Renewables, Electric, Eastern Europe



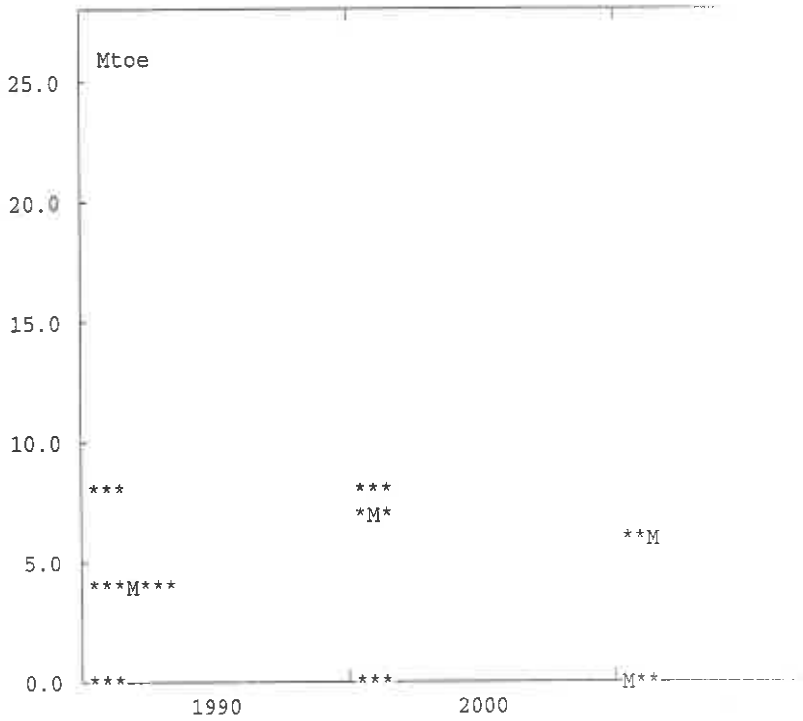
Medians:	1990	2000	2010	2020
EIA '95	14.0	12.4	24.0	12.5
ISREF '95	12.6	12.0	14.0	12.4
ISPRE '95	12.6	11.0	12.4	11.4
ISUNF '95	12.6	9.7	10.6	10.3
ITREF '93	12.4	9.7	10.2	10.0
IEA '94	10.0	9.5	9.9	10.0
ECSB '95	9.3	9.0		10.0
ECSC '95	9.3	9.0		6.0
ECSA '95	9.3	9.0		6.0
WECA '93	5.0			6.0
WECB '93	5.0			6.0
WECB1 '93	5.0			6.0
WECC '93	5.0			5.0

Nuclear Energy, Eastern Europe



Medians:	1990	2000	2010	2020			
EIA '95	19.0	EIA '95	24.0	EIA '95	24.0	WECB1'93	36.0
ISREF '95	15.0	IEA '94	16.0	ECSC '95	16.9	WECA '93	36.0
ISPRE '95	15.0	ISPRE '95	15.0	ECSB '95	16.9	ITREF '93	28.3
ISUNF '95	15.0	ECSA '95	12.0	ECSA '95	16.9	WECB '93	27.0
ITREF '93	14.9	ISUNF '95	12.0	IEA '94	14.0	WECC '93	25.0
IEA '94	13.0	ECSC '95	11.6	ITREF '93	7.6	ISPRE '95	23.0
ECSB '95	12.9	ECSB '95	11.6			ECSB '95	20.6
ECSC '95	12.9	ITREF '93	11.3			ECSC '95	20.6
ECSA '95	12.9	ISREF '95	9.0			ECSA '95	20.6
WECA '93	11.0					ISREF '95	12.0
WECB '93	11.0					ISUNF '95	3.0
WECB1 '93	11.0						
WECC '93	11.0						

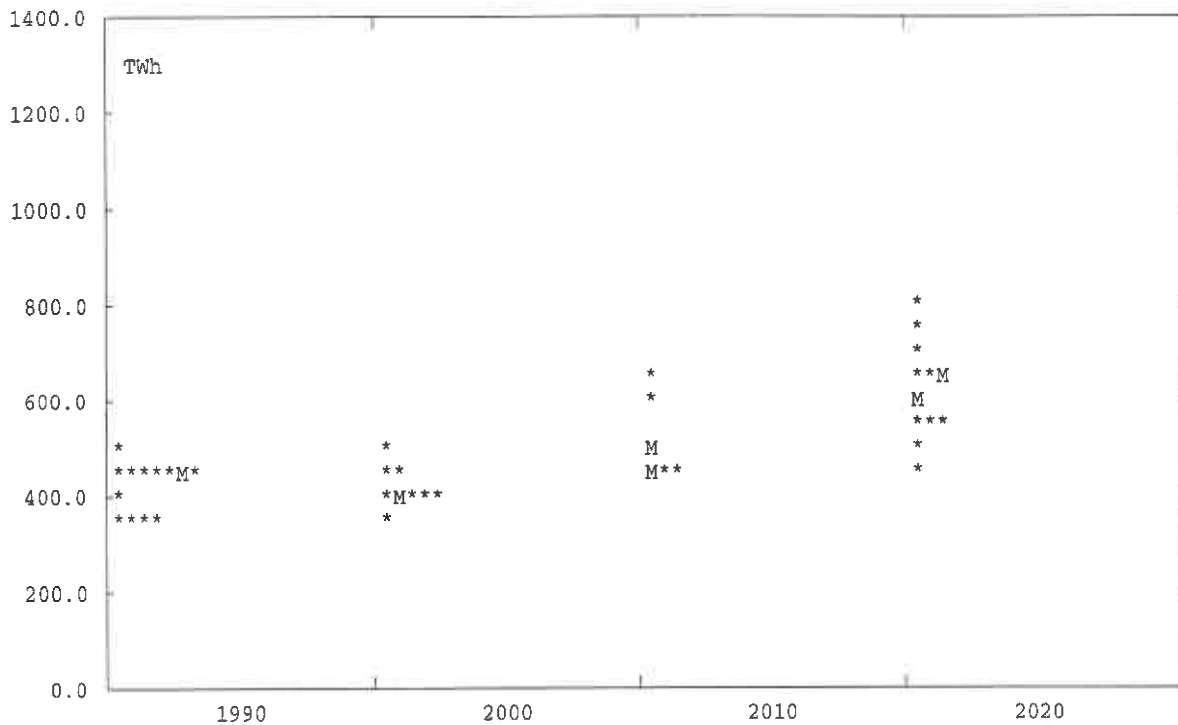
Renewables, Nonelectric, Eastern F



Medians:	4.0	6.5	2
ECSC '95	7.7	ISUNF'95	8.0
ECSA '95	7.7	ISREF'95	8.0
ECSB '95	7.7	ISPRE'95	8.0
WECEB '93	4.0	ECSC '95	6.5
WECEB1'93	4.0	ECSB '95	6.5
WECA '93	4.0	ECSA '95	6.5
WECC '93	4.0	ITREF'93	0.0
ISUNF'95	3.8	IEA '94	0.0
ISREF'95	3.8	GRREF'93	0.0
ISPRE'95	3.8		
ITREF'93	0.0		
IEA '94	0.0		
GRREF'93	0.0		

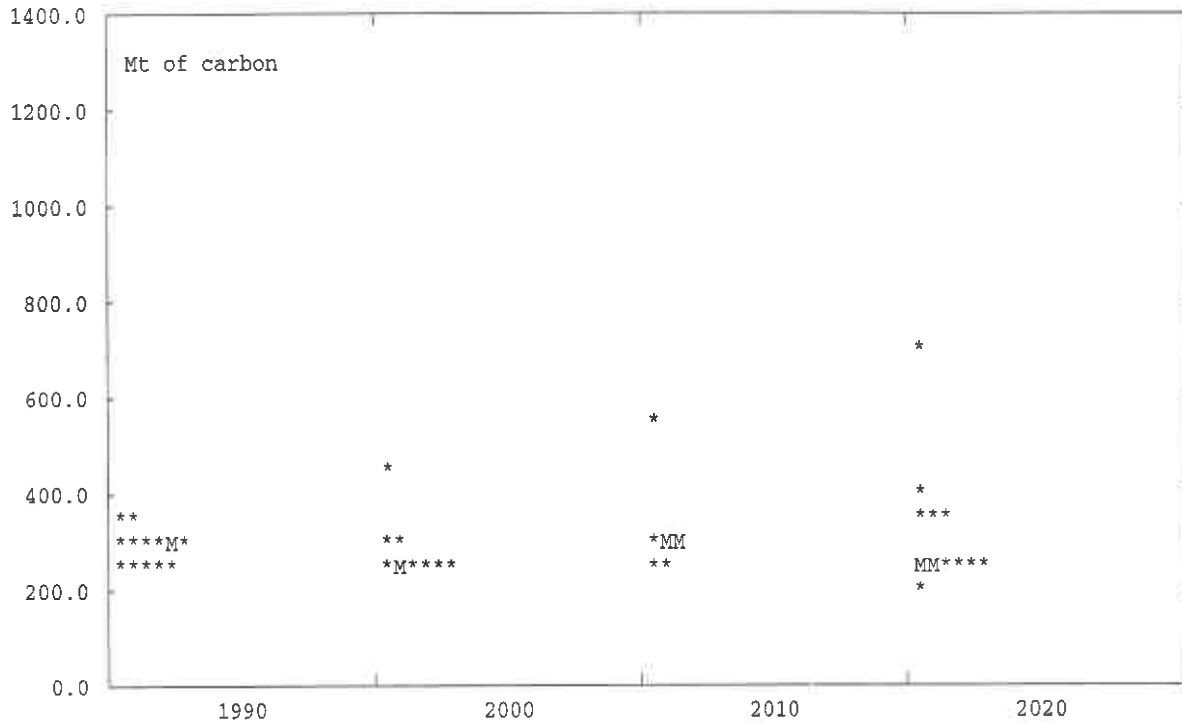


Electricity Generation, Eastern Europe



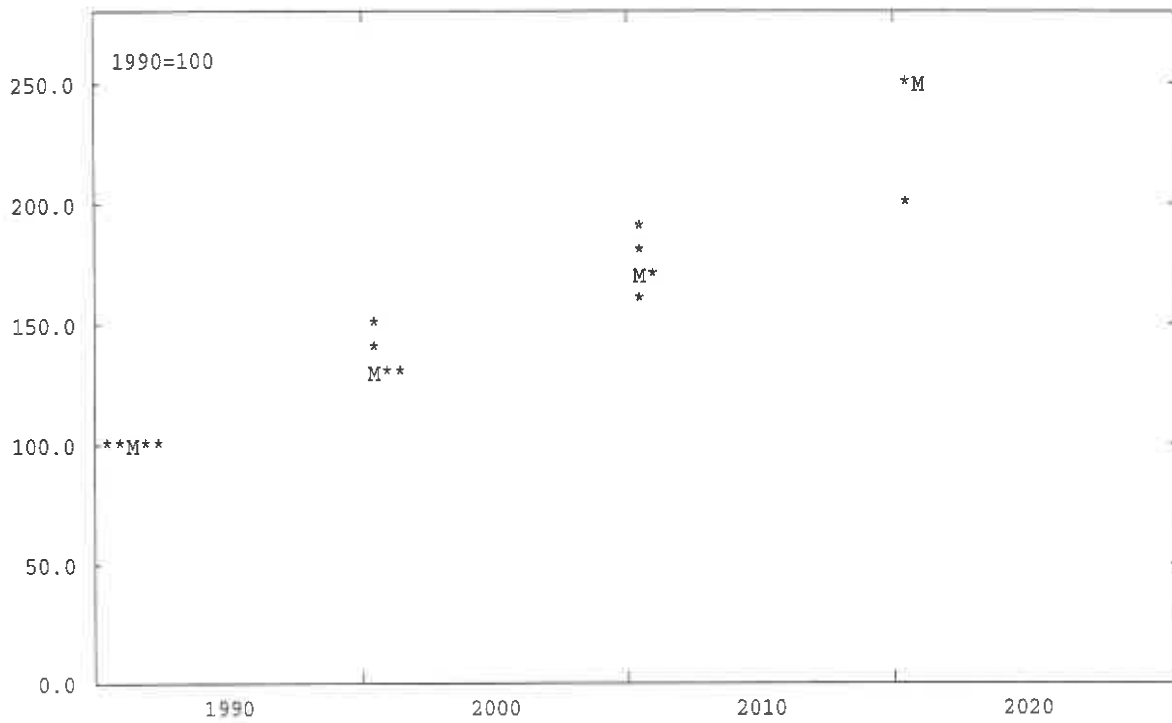
Medians:	1990	2000	2010	2020
GRREF'93	484.8	516.5	637.0	778.4
ECSC '95	464.7	448.8	581.0	749.0
ECSA '95	464.7	434.0	521.9	715.0
ECSB '95	464.7	420.9	466.4	670.1
IEA '94	444.0	397.2	429.0	645.0
ISPRE'95	442.0	382.0	428.0	645.0
ISUNF'95	442.0	382.0		594.0
ISREF'95	442.0	377.7		545.9
ITREF'93	423.0	369.0		530.0
WECA '93	362.0			528.0
WECB '93	362.0			497.7
WECB1'93	362.0			473.4
WECC '93	362.0			

Carbon Emissions, Eastern Europe



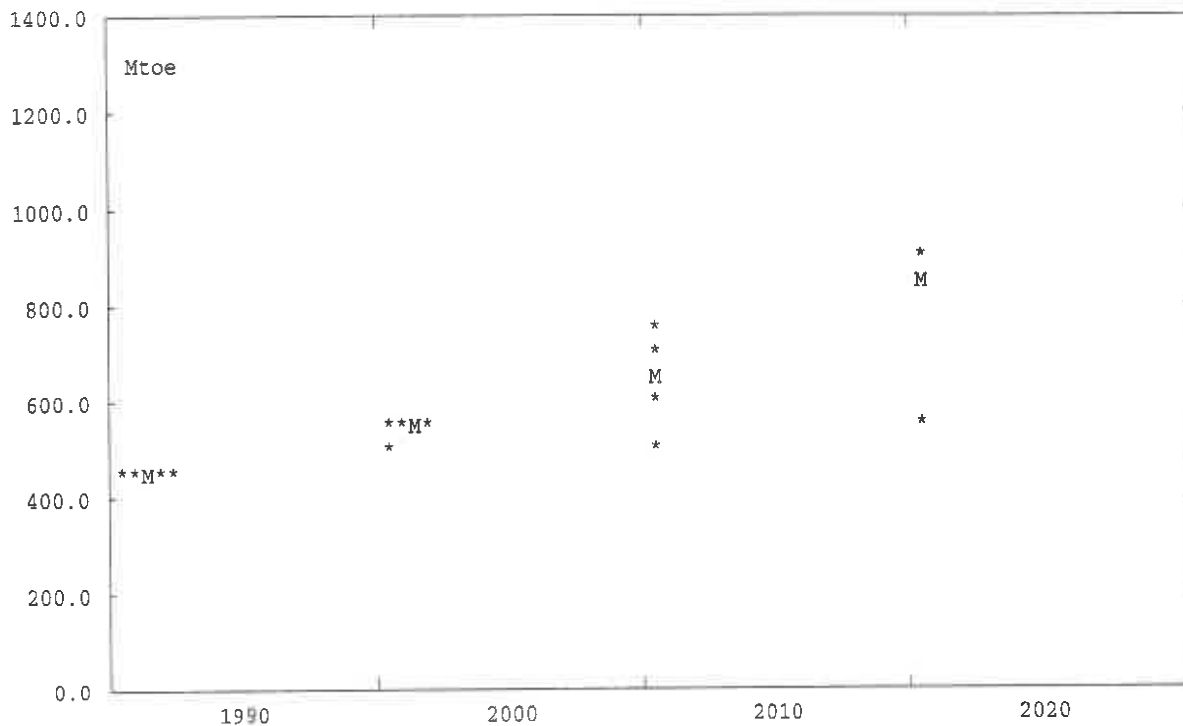
Medians:	1990	2000	2010	2020
GRREF '93	359.4	445.2	565.2	699.4
EIA '95	325.0	293.9	314.4	398.0
ISREF '95	310.0	278.6	302.4	358.0
ISPRE '95	310.0	267.0	290.0	345.5
ISUNF '95	310.0	249.0	239.6	335.9
ECSA '95	288.1	246.0	238.0	259.3
ECSC '95	288.1	238.4		257.9
ECSE '95	288.1	237.0		252.4
ITREF '93	271.0	229.3		247.0
WECA '93	230.0			234.6
WECB '93	230.0			230.0
WECB1 '93	230.0			178.9
WECC '93	230.0			

Real GNP (or GDP), Japan



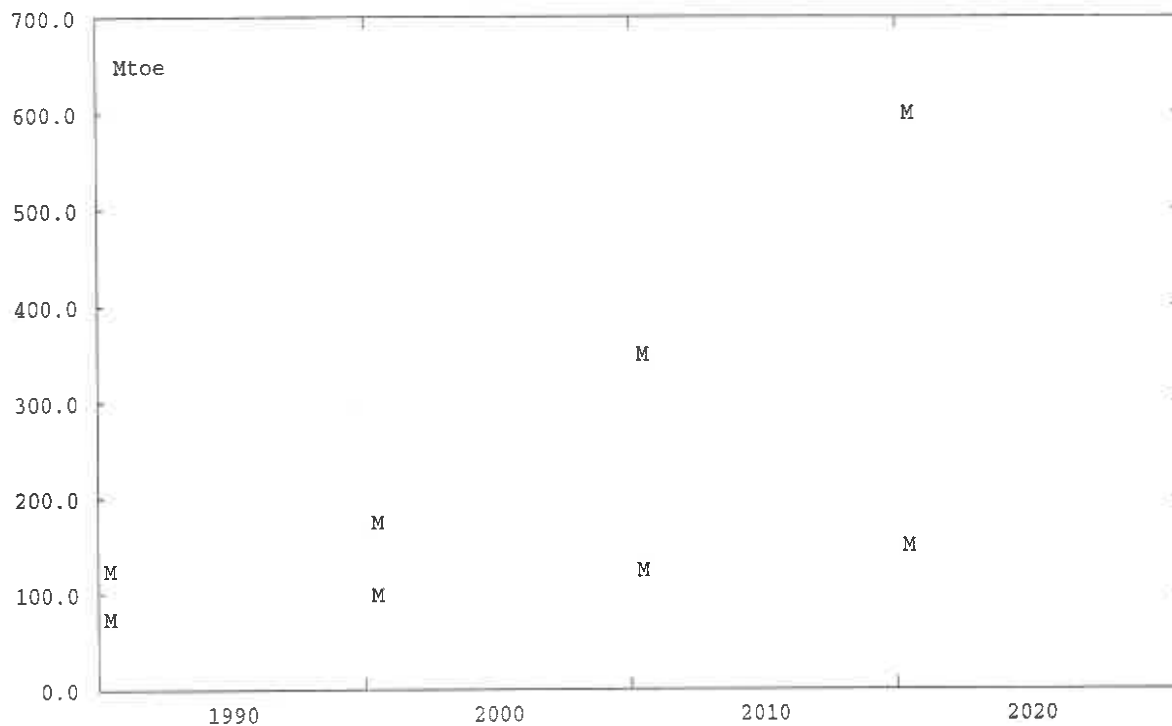
Medians:	1990	2000	2010	2020
	100.0	134.5	172.0	245.5
EIA '95	100.0	145.1	188.2	246.0
ITREF '93	100.0	143.6	184.1	245.5
KNREF '95	100.0	134.5	172.0	201.8
GRREF '93	100.0	134.0	171.0	
NEREF '94	100.0	131.0	164.6	

Total PE Consumption, Japan



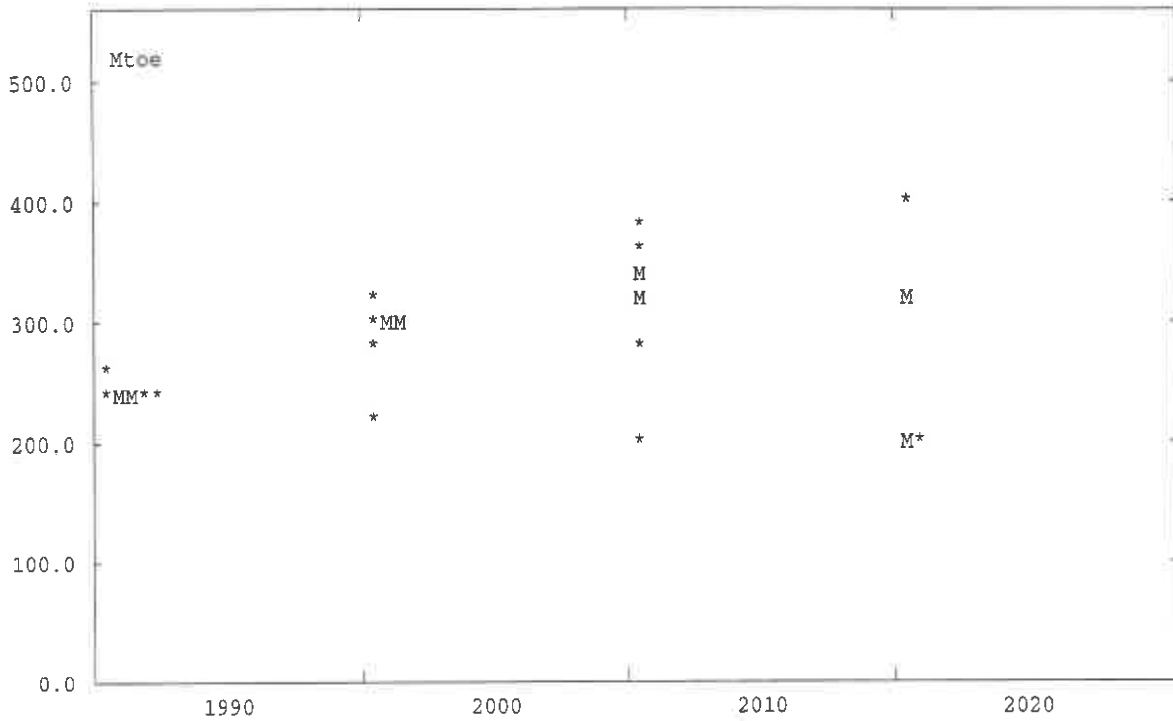
	1990	2000	2010	2020
Medians:	428.0	542.0	651.0	859.0
KNREF '95	437.0	565.8	729.5	917.1
NEREF '94	428.7	545.0	681.2	859.0
EIA '95	428.0	542.0	651.0	526.8
GRREF '93	427.1	539.4	621.0	
ITREF '93	426.5	475.9	503.6	

Total PE Production, Japan



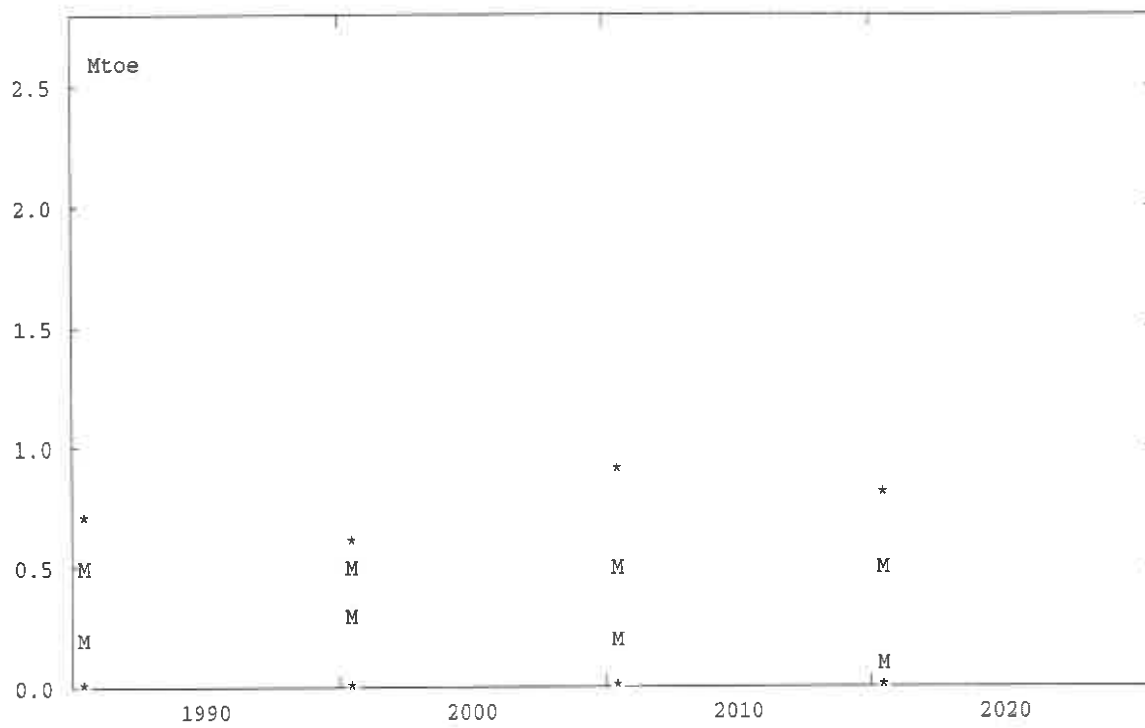
Medians:	103.5	137.1	244.0	365.0
GRREF'93	131.6	170.4	354.1	590.9
NEREF'94	75.5	103.8	134.0	139.0

Oil Consumption, Japan



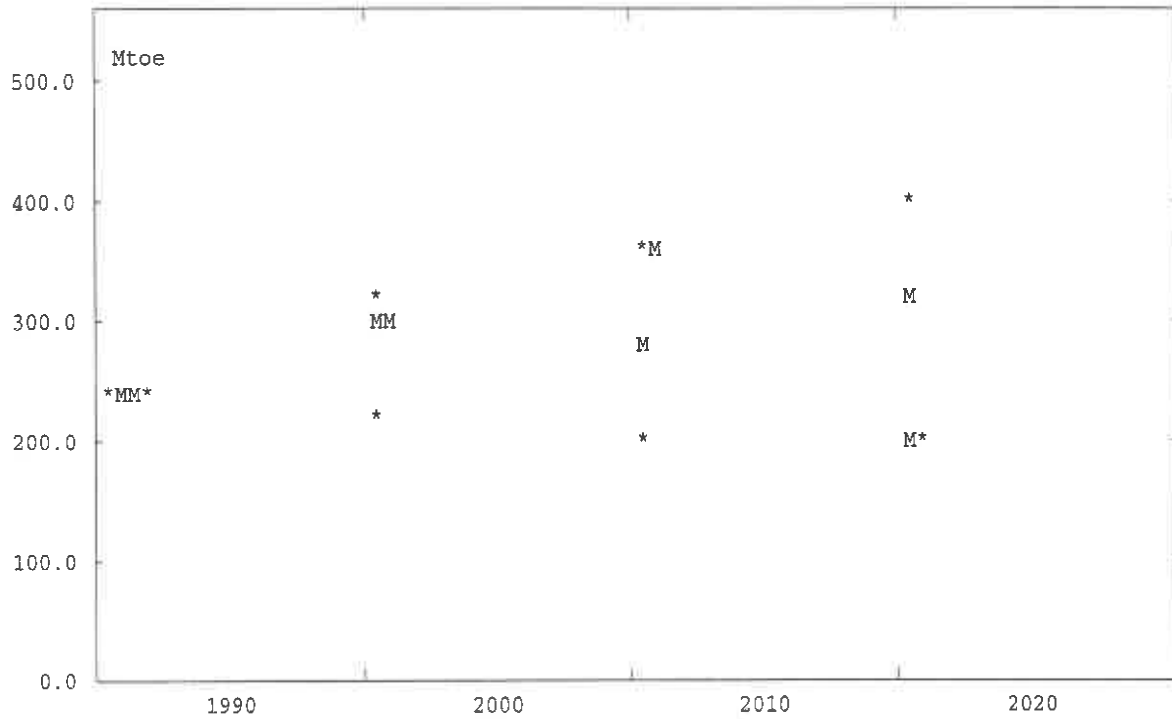
Medians:	1990	2000	2010	2020			
KNREF'95	252.0	ITREF'93	329.8	ITREF'93	370.2	LYNCH'94	402.1
NEREF'94	241.6	GRREF'93	307.3	LYNCH'94	364.1	ITREF'93	328.6
LYNCH'94	245.0	KNREF'95	305.0	KNREF'95	332.0	GRREF'93	199.2
EIA '95	245.0	LYNCH'94	298.7	EIA '95	315.0	NEREF'94	196.1
ITREF'93	239.9	EIA '95	284.0	GRREF'93	286.7		
GRREF'93	233.1	NEREF'94	221.3	NEREF'94	208.0		

Oil Production, Japan



Medians:	0.4	0.4	0.3	0.3			
NEREF'94	0.7	ITREF'93	0.6	ITREF'93	0.9	ITREF'93	0.8
GRREF'93	0.5	GRREF'93	0.5	GRREF'93	0.5	GRREF'93	0.5
ITREF'93	0.2	NEREF'94	0.3	NEREF'94	0.2	NEREF'94	0.1
LYNCH'94	0.0	LYNCH'94	0.0	LYNCH'94	0.0	LYNCH'94	0.0

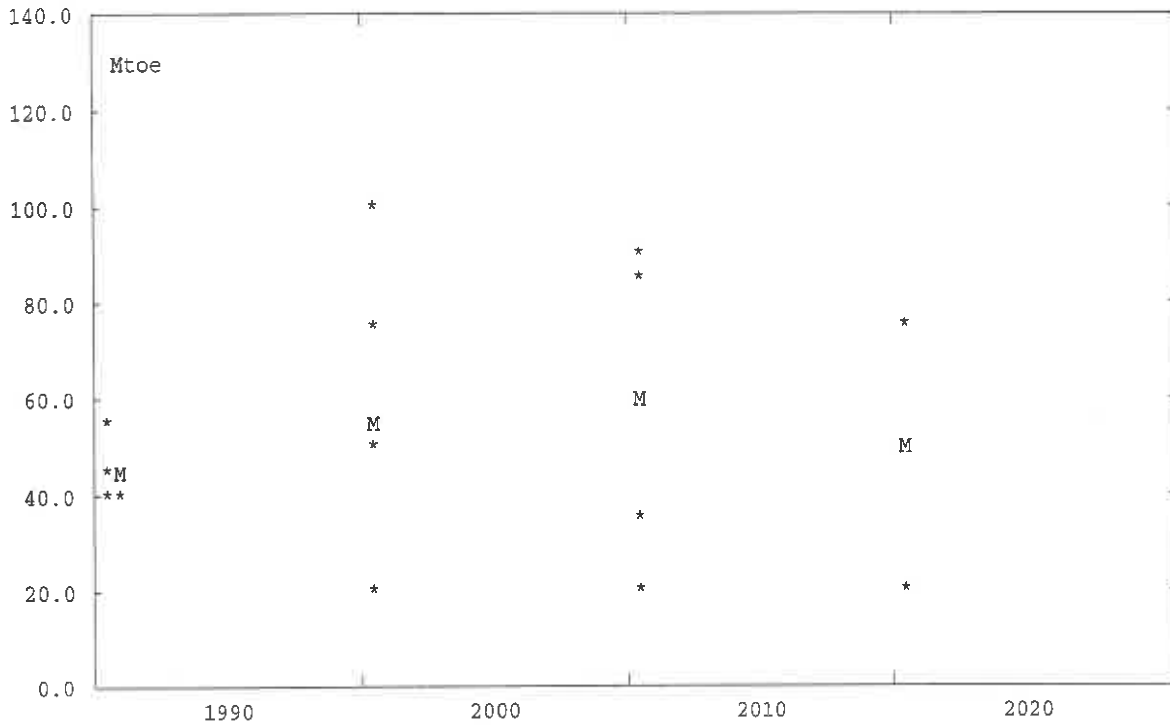
Oil Imports - Exports, Japan



Medians:	242.4	302.7	325.2	263.3
NEREF'94	245.9	329.2	369.3	402.1
LYNCH'94	245.0	306.8	364.1	327.8
ITREF'93	239.7	298.7	286.2	198.8
GRREF'93	232.6	221.0	207.8	196.0

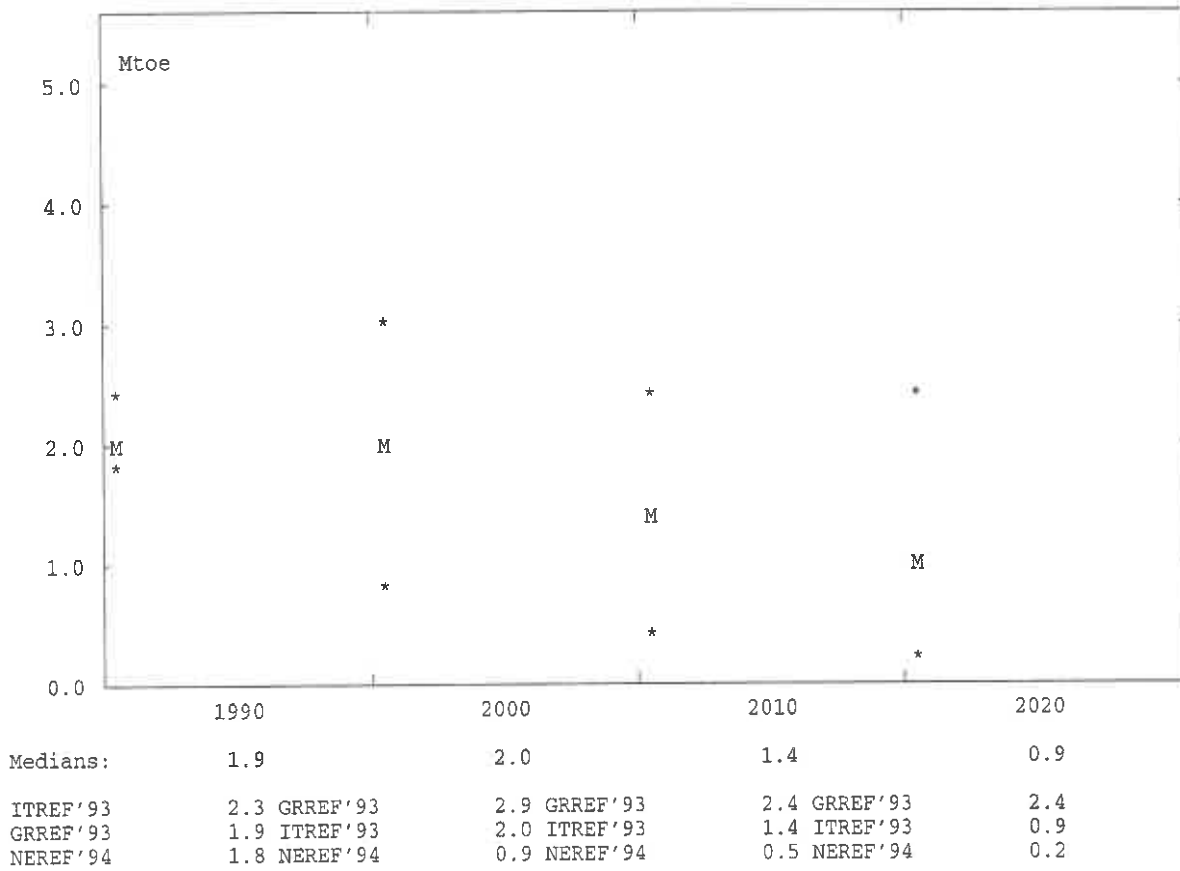


Natural Gas Consumption, Japan

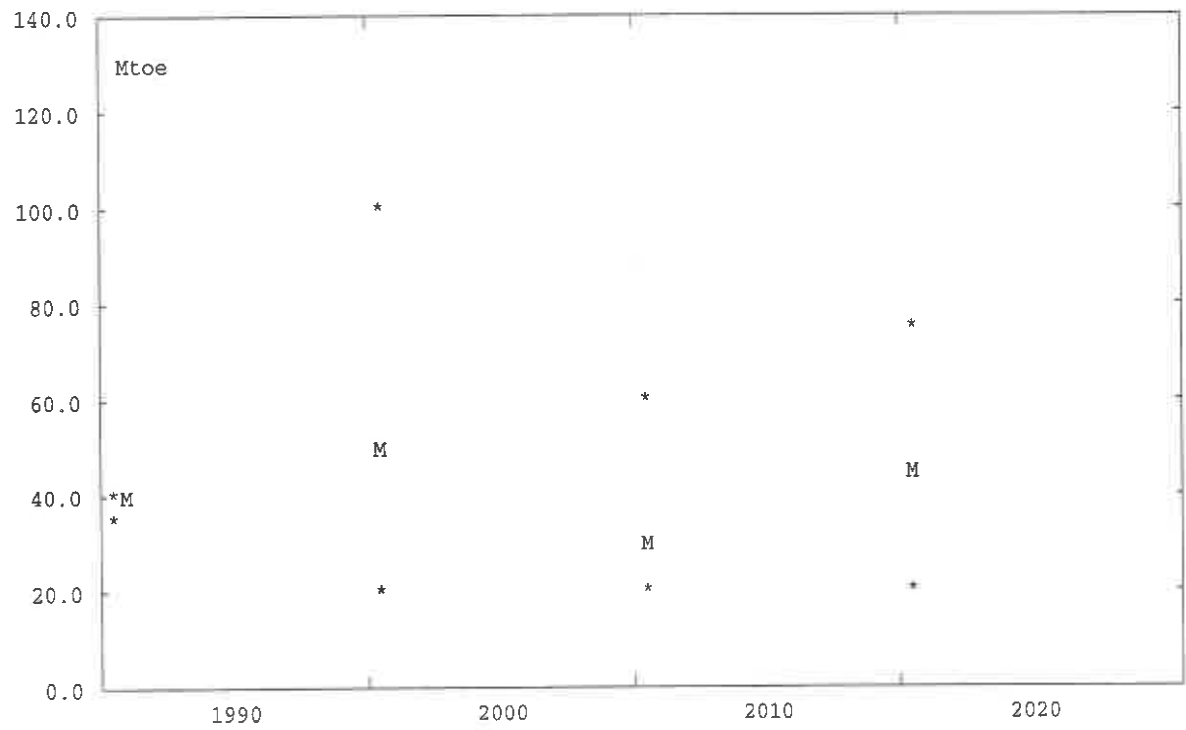


Medians:	1990	2000	2010	2020
KNREF'95	56.0	100.9	88.0	74.5
EIA '95	47.0	73.0	87.0	48.6
ITREF'93	44.7	57.0	60.4	20.0
NEREF'94	41.7	50.7	34.4	
GRREF'93	38.7	18.4	19.2	

Natural Gas Production, Japan

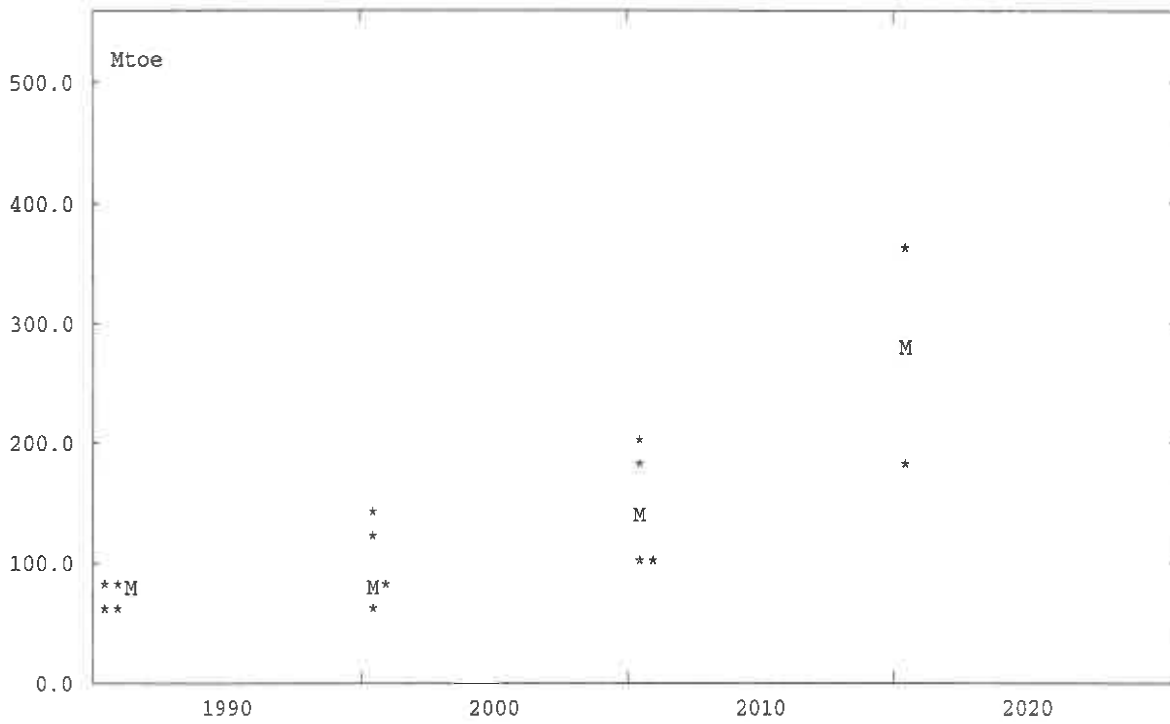


Natural Gas Imports - Exports, Japan



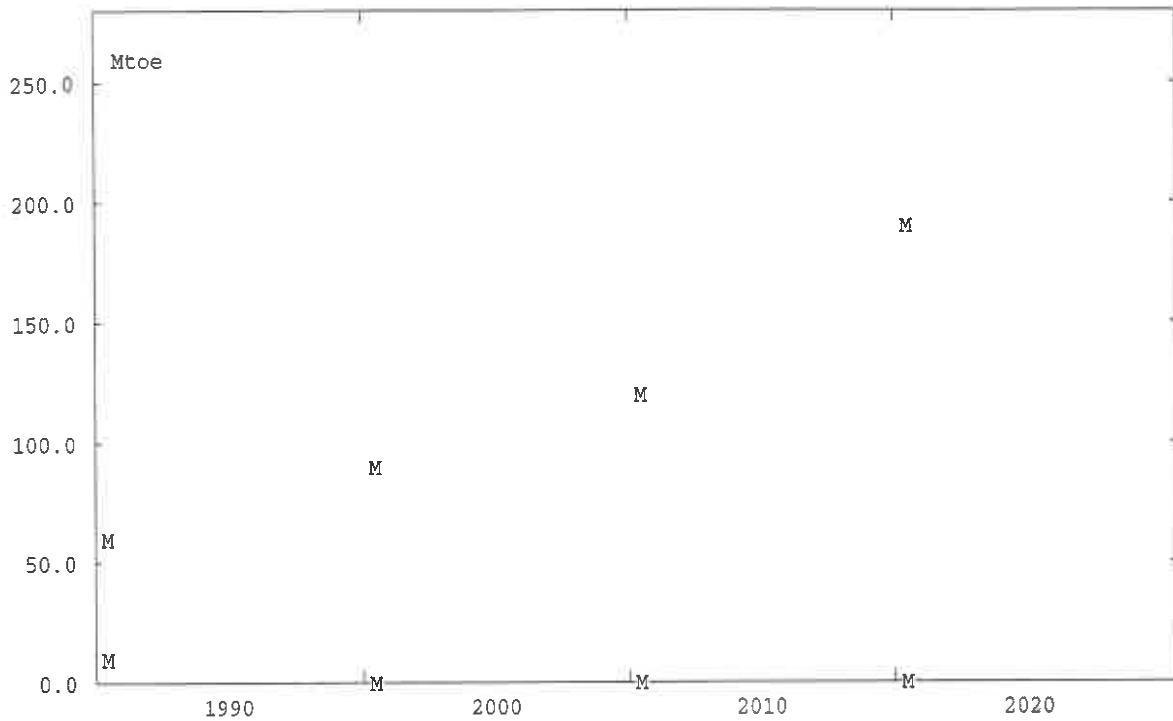
Medians:	39.9	47.8	32.0	46.2
ITREF'93	42.3	98.8	59.0	73.5
NEREF'94	39.9	47.8	32.0	46.2
GRREF'93	36.8	17.5	18.7	19.7

Coal Consumption, Japan



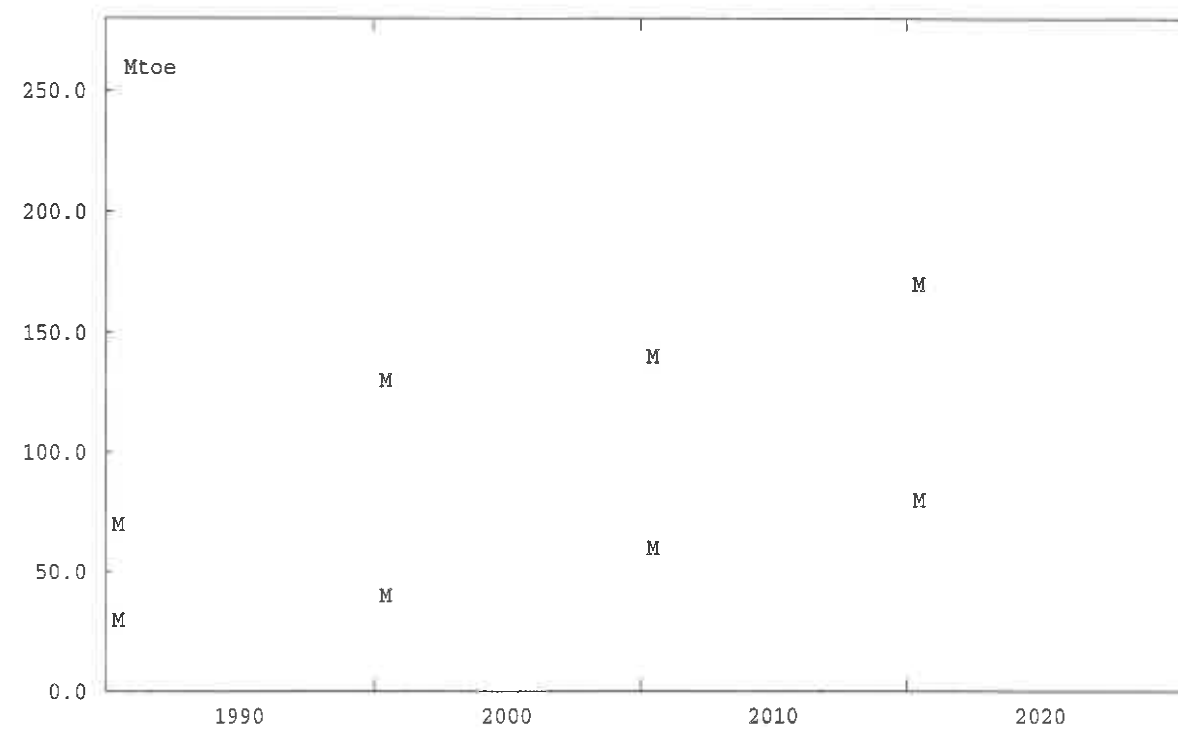
	1990	2000	2010	2020
Medians:	73.2	85.0	144.5	276.2
GRREF '93	87.4	136.6	200.7	354.0
ITREF '93	74.5	129.9	174.6	276.2
NEREF '94	73.2	85.0	144.5	172.9
EIA '95	68.0	80.0	93.0	
KNREF '95	64.0	52.9	92.0	

Coal Production, Japan



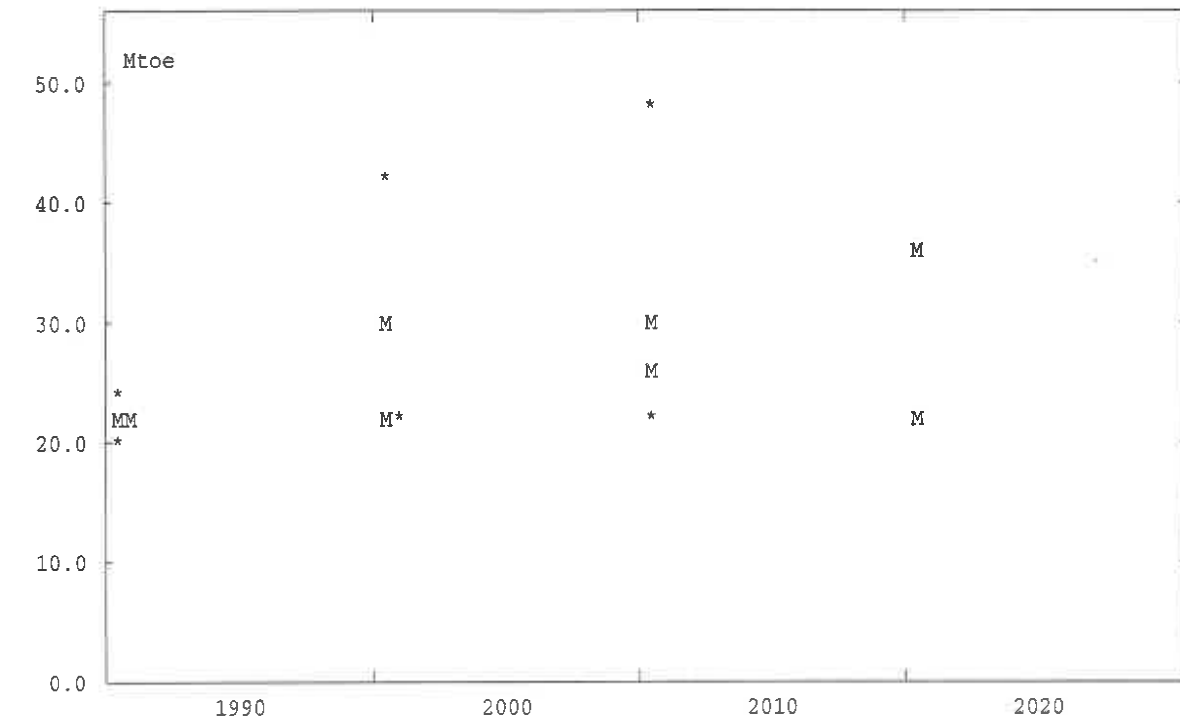
Medians:	33.5	46.0	59.4	97.8
GRREF'93	61.2	89.0	117.4	195.0
NEREF'94	5.8	2.9	1.4	0.7

Coal Imports - Exports, Japan



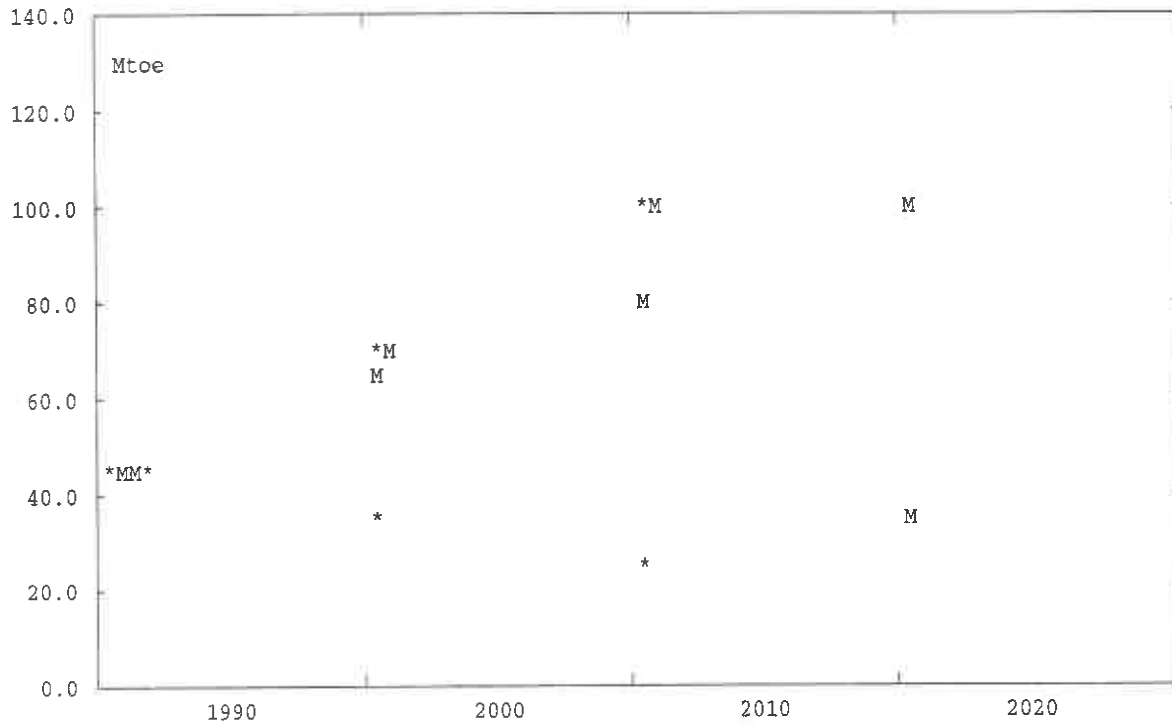
Medians:	46.8	87.3	100.2	126.7
NEREF'94	67.4	133.7	143.1	172.1
GRREF'93	26.2	40.9	57.2	81.2

Renewables, Electric, Japan



Medians:	1990	2000	2010	2020			
	22.4	26.0	28.5	29.7			
EIA '95	24.0	EIA '95	42.0	EIA '95	47.0	NEREF'94	36.8
ITREF'93	22.6	NEREF'94	29.4	NEREF'94	30.9	ITREF'93	22.6
NEREF'94	22.3	ITREF'93	22.6	KNREF'95	26.0		
KNREF'95	19.0	KNREF'95	22.0	ITREF'93	22.6		

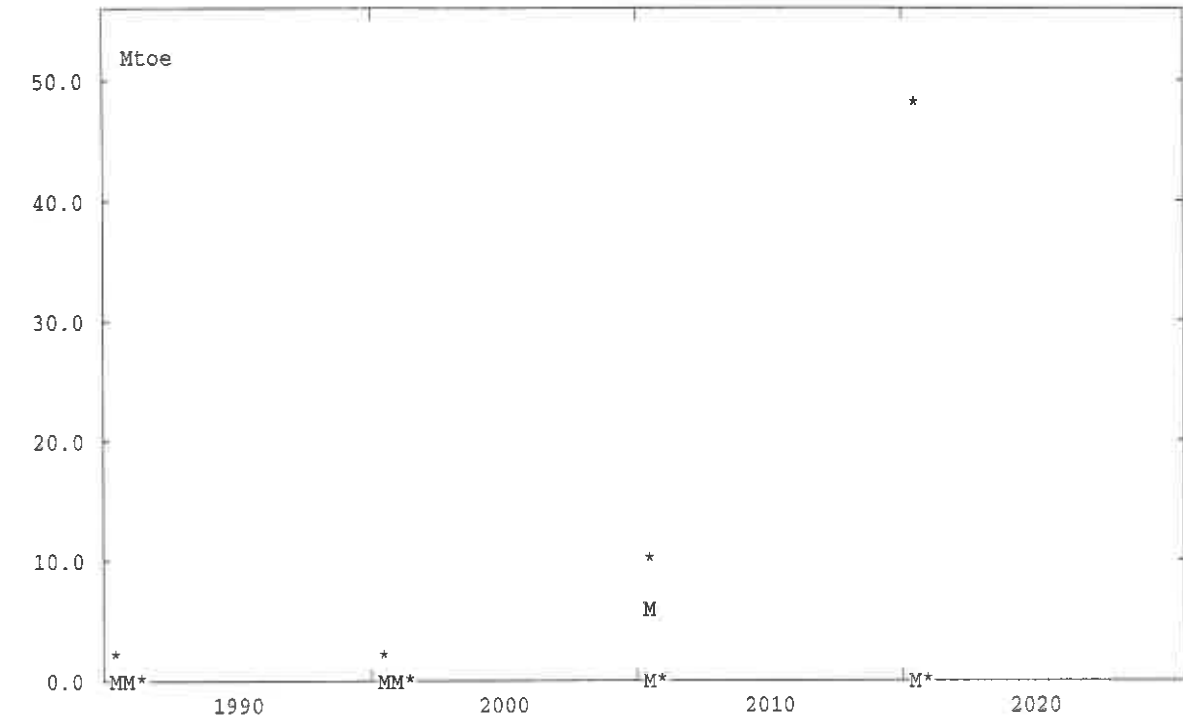
Nuclear Energy, Japan



Medians:	45.0	68.1	90.6	68.5
KNREF'95	46.0	71.0	102.0	101.1
EIA '95	45.0	70.2	101.1	36.0
NEREF'94	44.9	66.0	80.0	
ITREF'93	44.9	33.6	22.6	

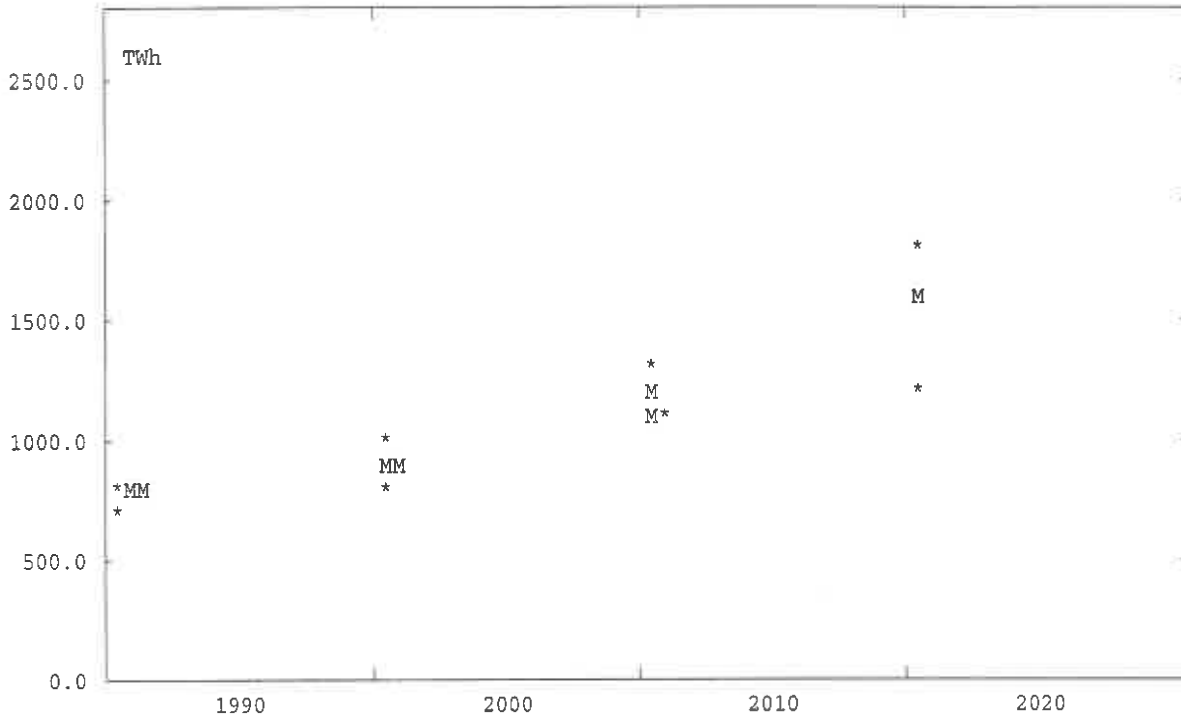


Renewables, Nonelectric, Japan



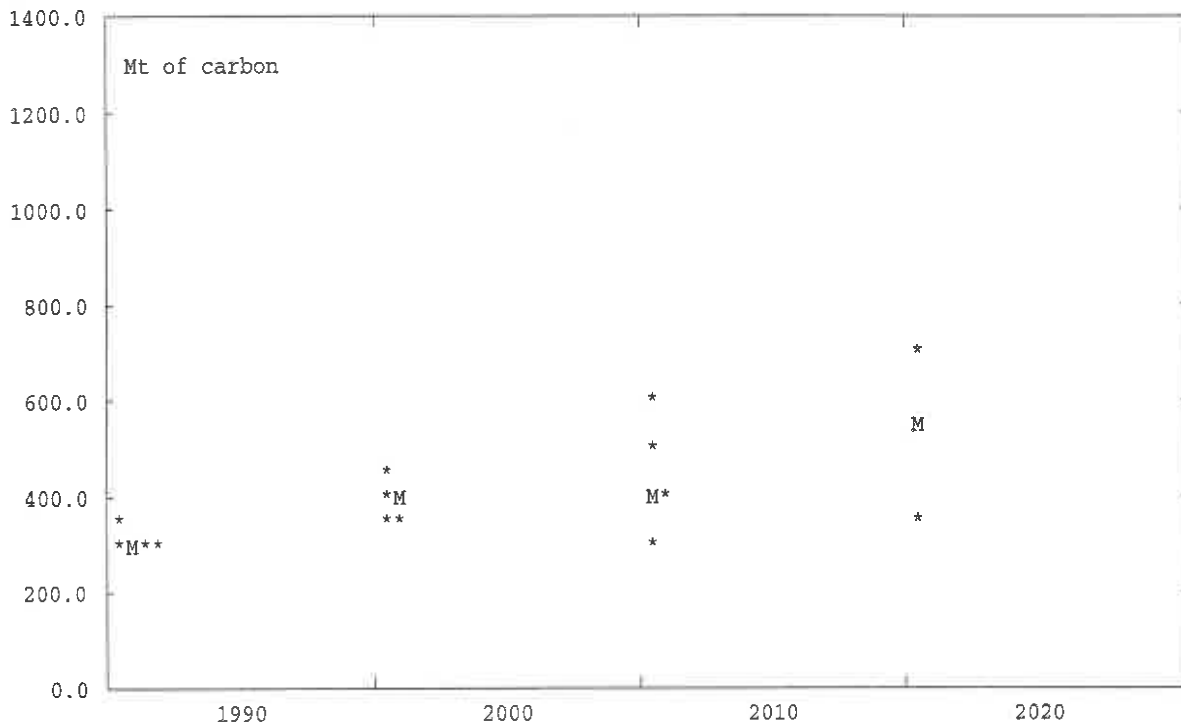
Medians:	0.0	0.0	2.9	0.0			
KNREF'95	1.0	KNREF'95	2.0	KNREF'95	10.0	ITREF'93	47.0
ITREF'93	0.0	ITREF'93	0.0	ITREF'93	5.9	GRREF'93	0.0
GRREF'93	0.0	GRREF'93	0.0	GRREF'93	0.0	NEREF'94	0.0
NEREF'94	0.0	NEREF'94	0.0	NEREF'94	0.0		

Electricity Generation, Japan



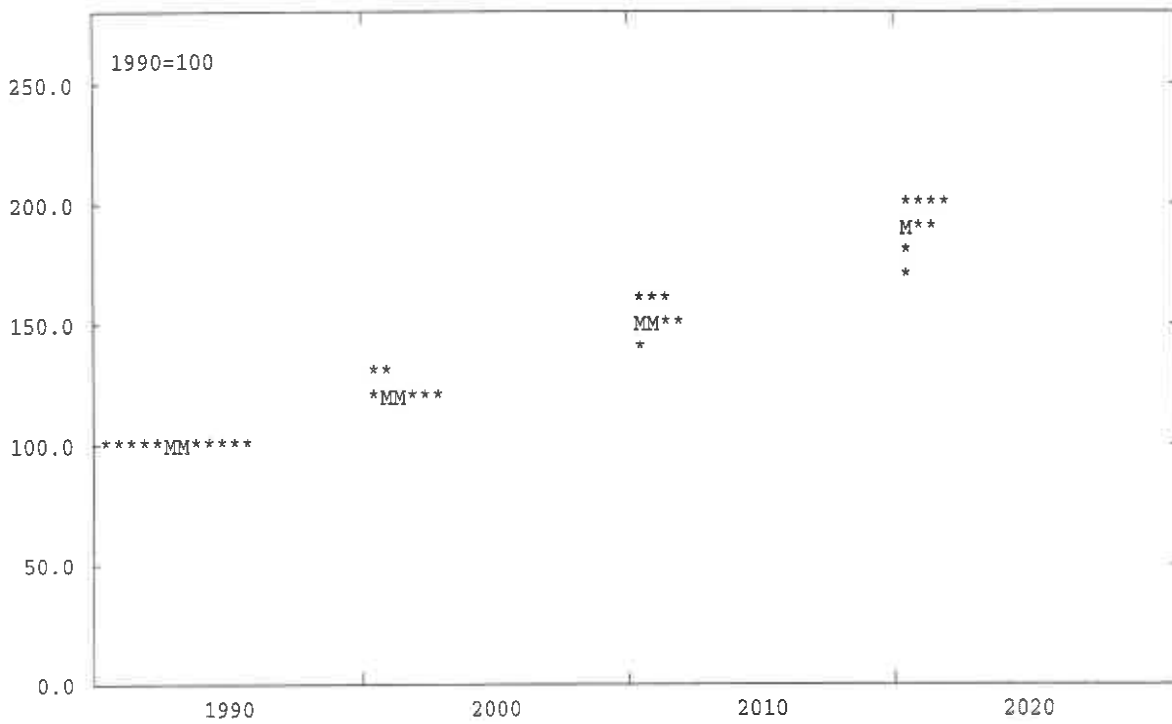
Medians:	771.1	914.8	1172.9	1645.3
ITREF'93	808.0	ITREF'93 1029.6	ITREF'93 1285.6	GRREF'93 1847.7
NEREF'94	791.2	NEREF'94 924.5	GRREF'93 1248.8	ITREF'93 1645.3
KNREF'95	751.0	KNREF'95 905.0	KNREF'95 1097.0	NEREF'94 1226.1
GRREF'93	706.0	GRREF'93 752.1	NEREF'94 1063.4	

Carbon Emissions, Japan



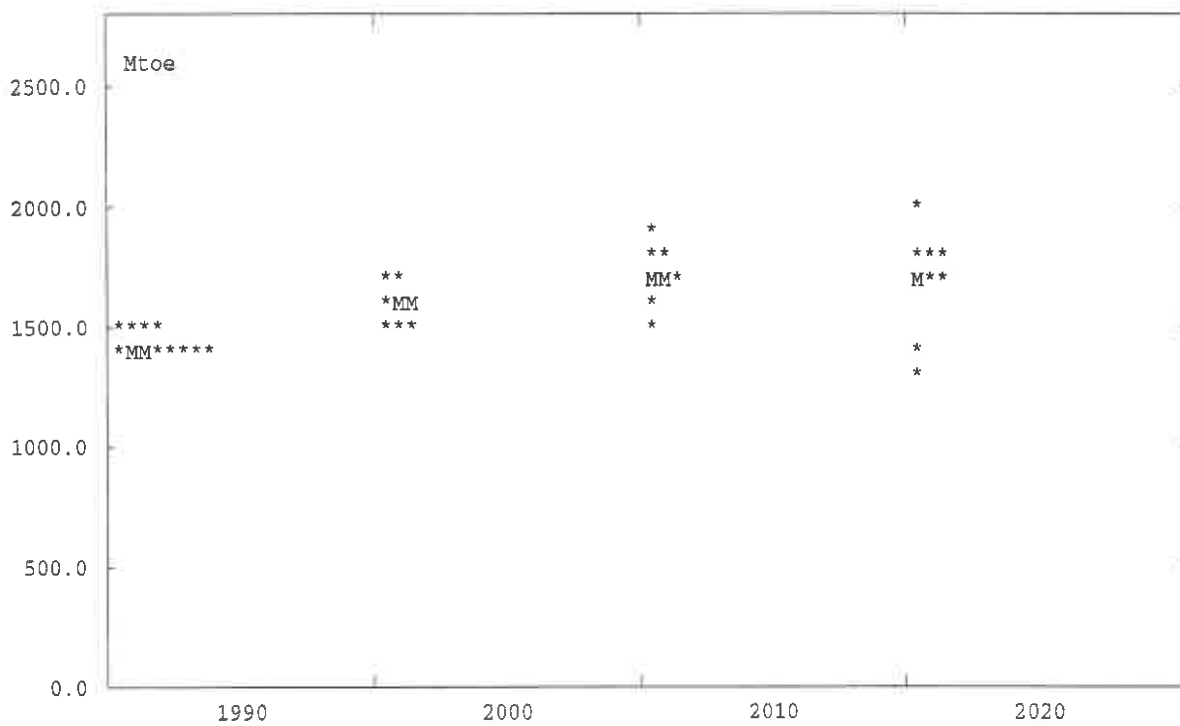
Medians:	306.0	375.0	421.0	565.0			
GRREF'93	333.1	GRREF'93	460.7	ITREF'93	580.1	ITREF'93	710.3
EIA '95	312.0	ITREF'93	417.7	GRREF'93	476.5	GRREF'93	565.0
ITREF'93	306.0	EIA '95	375.0	EIA '95	421.0	NEREF'94	341.8
KNREF'95	300.0	KNREF'95	360.0	KNREF'95	408.0		
NEREF'94	296.1	NEREF'94	325.4	NEREF'94	322.9		

Real GNP (or GDP), OECD Europe



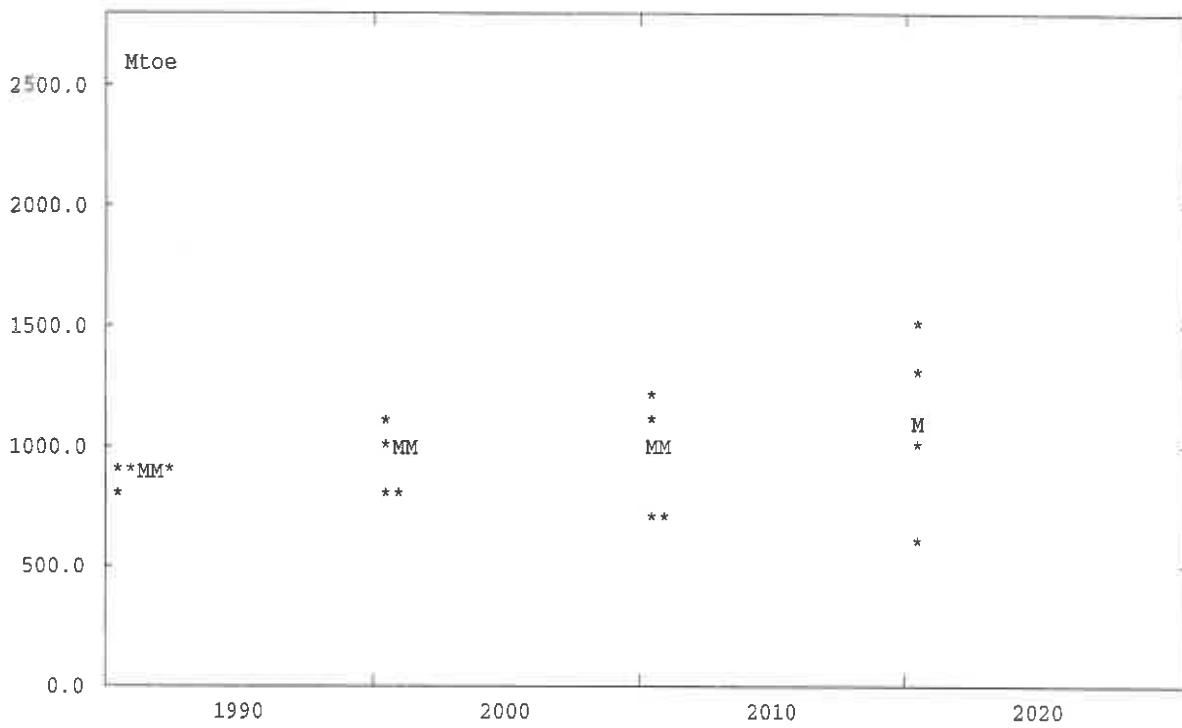
Medians:	1990	2000	2010	2020
ECSA '95	100.0	128.8	159.2	203.7
ECSCB '95	100.0	128.2	157.0	203.7
ECSC '95	100.0	124.5	156.8	203.7
EIA '95	100.0	122.2	153.7	203.7
IEA '94	100.0	122.0	151.0	192.3
DRI '93	100.0	121.5	149.5	192.2
NEREF'94	100.0	121.0	147.2	190.7
OWREF'95	100.0	115.5	142.9	175.9
WECA '93	100.0		ECSC '95	165.1
WECEB '93	100.0			
WECEB1'93	100.0			
WECC '93	100.0			

Total PE Consumption, OECD Europe



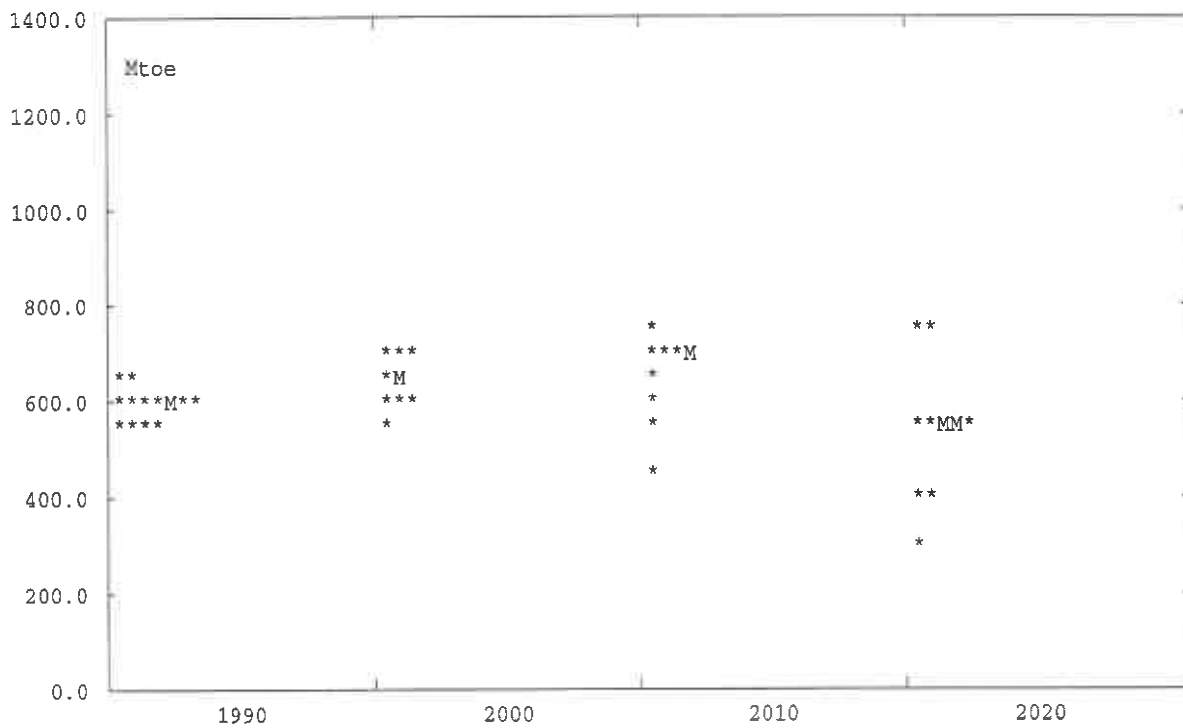
Medians:	1990	2000	2010	2020			
ECSA '95	1455.2	EIA '95	1681.0	EIA '95	1876.0	ECSA '95	1981.6
ECSB '95	1455.2	ECSA '95	1650.5	IEA '94	1839.0	OWREF '95	1837.5
ECSC '95	1455.2	IEA '94	1646.0	ECSA '95	1824.4	ECSB '95	1800.3
IEA '94	1450.0	ECSB '95	1606.1	OWREF '95	1718.6	WECA '93	1793.0
NEREF '94	1447.9	OWREF '95	1575.6	ECSC '95	1709.2	WECB '93	1705.0
WECC '93	1442.0	DRI '93	1536.0	DRI '93	1697.0	WECB1 '93	1705.0
WECB '93	1442.0	ECSC '95	1468.9	NEREF '94	1551.6	NEREF '94	1652.0
WECB1 '93	1442.0	NEREF '94	1457.5	ECSC '95	1452.1	ECSC '95	1424.1
WECA '93	1442.0					WECC '93	1304.0
EIA '95	1432.0						
DRI '93	1423.0						
OWREF '95	1418.2						

Total PE Production, OECD Europe



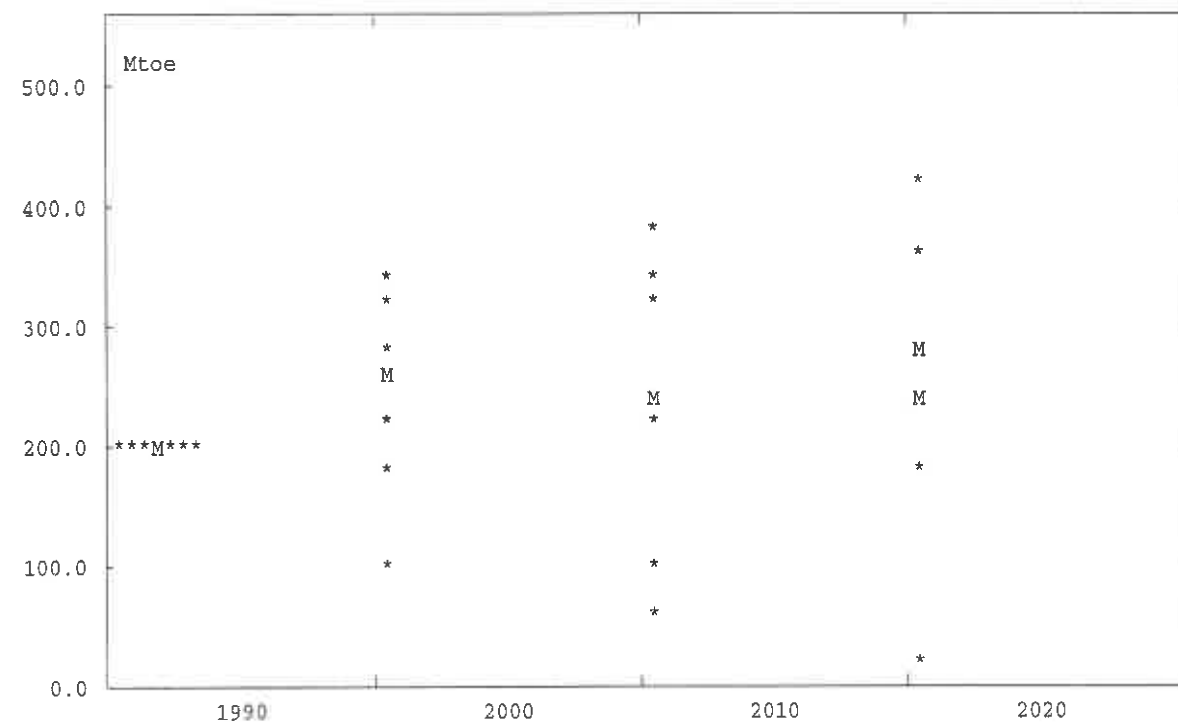
	1990	2000	2010	2020
Medians:	884.3	976.8	1017.1	1076.3
ECSA '95	886.8	1095.3	1221.3	1451.0
ECSB '95	886.8	1029.8	1144.6	1279.5
ECSC '95	886.8	997.9	1032.5	1076.3
NEREF '94	881.8	955.7	1001.7	950.8
DRI '93	853.0	827.0	727.0	575.4
OWREF '95	826.3	755.4	694.5	

Oil Consumption, OECD Europe



Medians:	1990	2000	2010	2020
OWREF '95	629.3	696.0	745.0	735.6
EIA '95	628.0	685.5	715.9	728.1
LYNCH '94	617.8	675.0	699.8	561.5
NEREF '94	615.2	652.0	699.0	554.7
DRI '93	609.0	649.4	687.0	540.0
ECSB '95	603.6	607.9	628.3	534.0
ECSC '95	603.6	602.8	575.9	528.0
ECSA '95	603.6	598.4	548.8	423.7
IEA '94	603.0	559.2	467.6	375.0
WECA '93	568.0		ECSC '95	322.2
WECEB '93	568.0			
WECEB1 '93	568.0			
WECC '93	568.0			

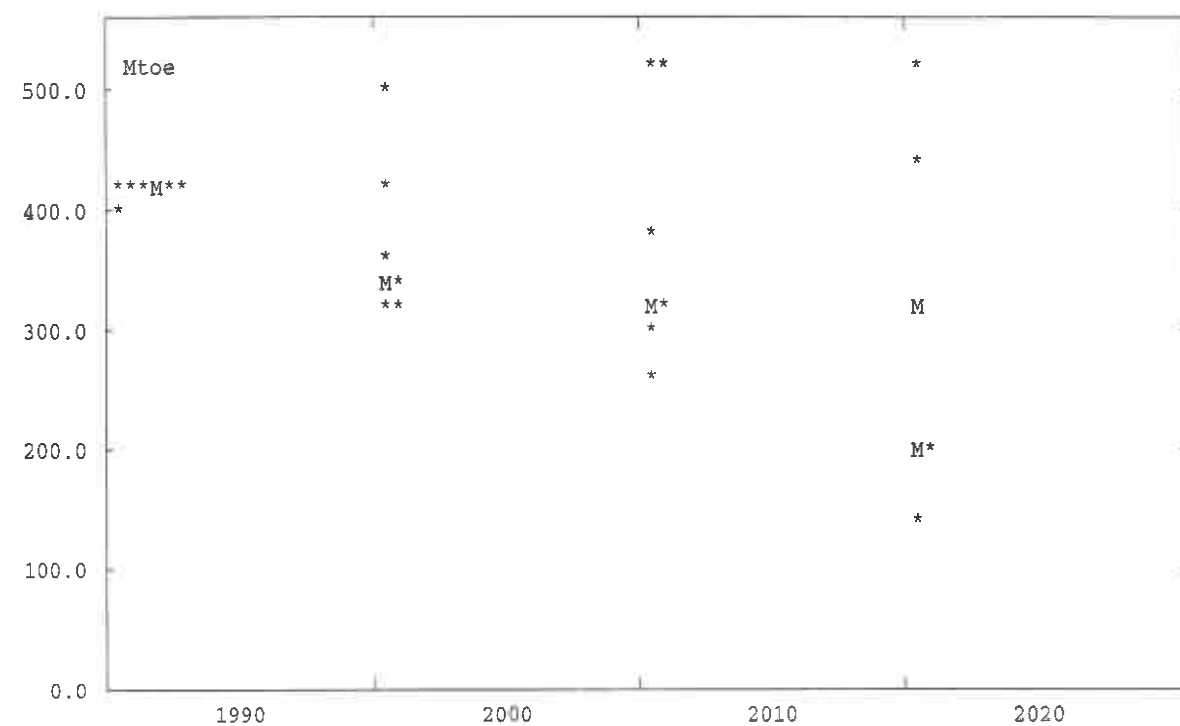
Oil Production, OECD Europe



Medians:	1990	2000	2010	2020
ECSC '95	209.0	346.5	381.7	411.3
ECSA '95	209.0	328.9	337.6	363.0
ECSB '95	209.0	281.2	315.1	280.9
NEREF '94	205.1	251.2	241.4	232.8
DRI '93	203.0	221.9	217.5	184.0
OWREF '95	202.9	184.0	109.0	25.6
LYNCH '94	201.9	102.5	51.3	

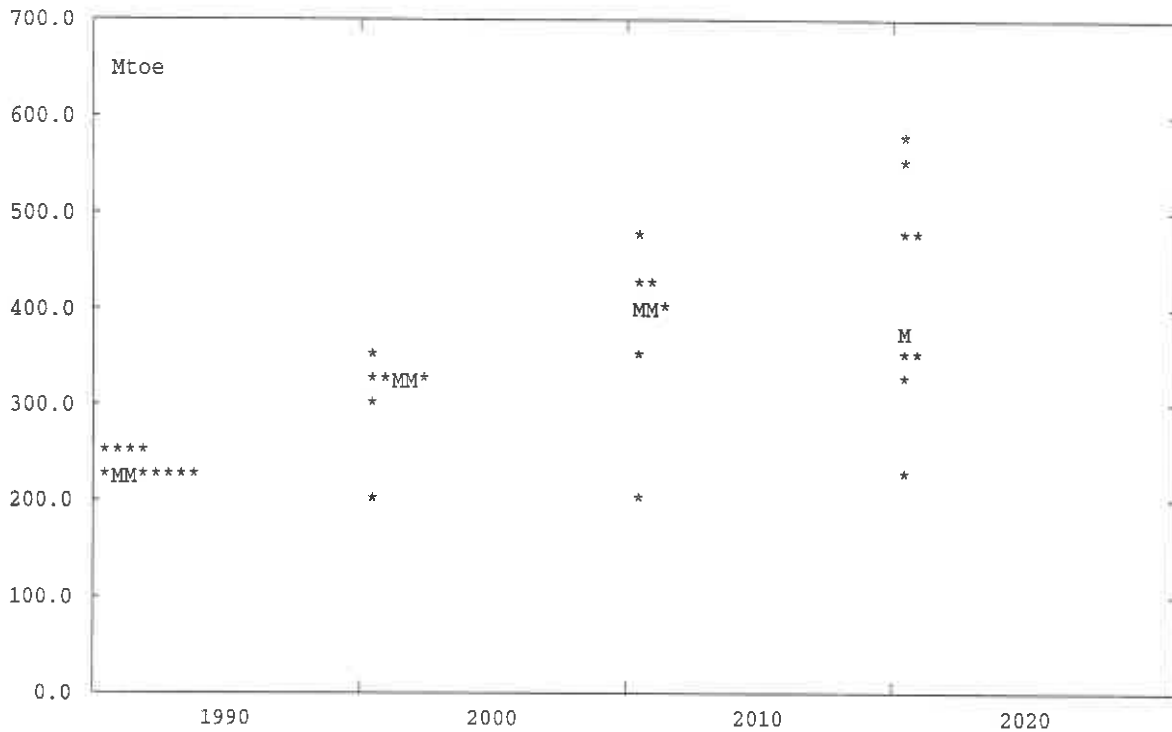


Oil Imports - Exports, OECD Europe



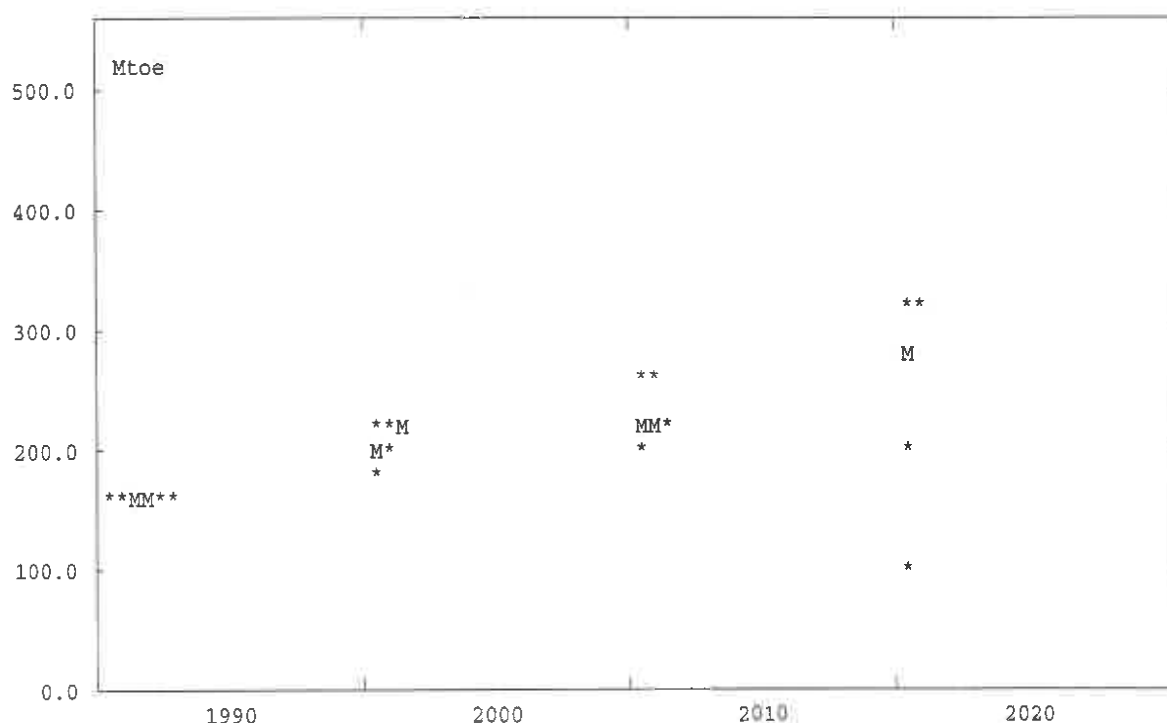
	1990	2000	2010	2020
Medians:	426.4	341.1	318.1	261.4
ECSC '95	429.5	495.9	524.7	529.1
ECSA '95	429.5	417.0	521.0	449.3
ECSB '95	429.5	351.5	380.5	324.3
OWREF '95	426.4	341.1	318.1	198.4
LYNCH '94	415.9	337.3	313.2	190.9
NEREF '94	410.2	326.7	307.5	138.2
DRI '93	407.0	320.5	250.1	

Natural Gas Consumption, OECD Europe



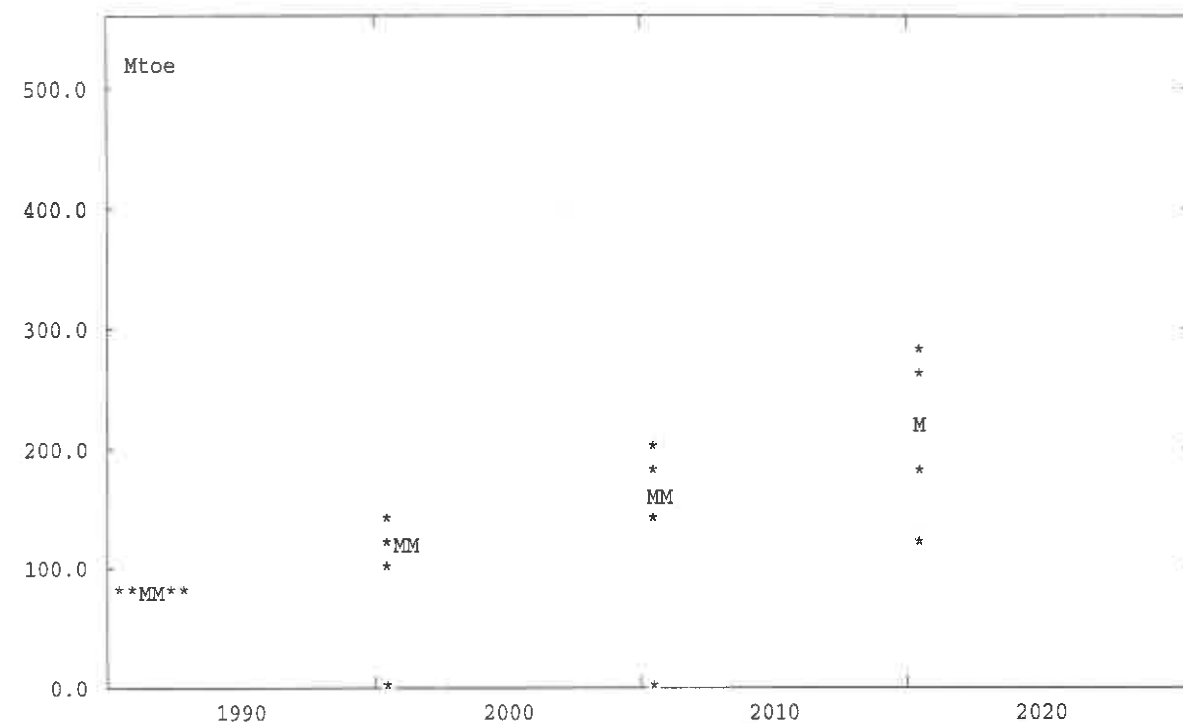
	1990	2000	2010	2020			
Medians:	229.6	314.6	403.5	379.0			
WECB '93	254.0	EIA '95	357.0	EIA '95	466.0	ECSC '95	576.1
WECB1 '93	254.0	ECSC '95	332.9	ECSC '95	425.6	ECSC '95	543.2
WECA '93	254.0	ECSC '95	329.7	ECSC '95	414.4	OWREF '95	479.0
WECC '93	254.0	OWREF '95	315.2	IEA '94	404.0	ECSC '95	467.6
NEREF '94	235.4	DRI '93	314.0	DRI '93	403.0	WECA '93	379.0
IEA '94	230.0	IEA '94	313.0	OWREF '95	395.6	WECB '93	354.0
ECSC '95	229.3	ECSC '95	308.0	ECSC '95	360.4	WECB1 '93	353.0
ECSB '95	229.3	NEREF '94	200.4	NEREF '94	212.3	WECC '93	313.0
ECSC '95	229.3					NEREF '94	224.9
EIA '95	228.0						
OWREF '95	227.0						
DRI '93	225.0						

Natural Gas Production, OECD Europe



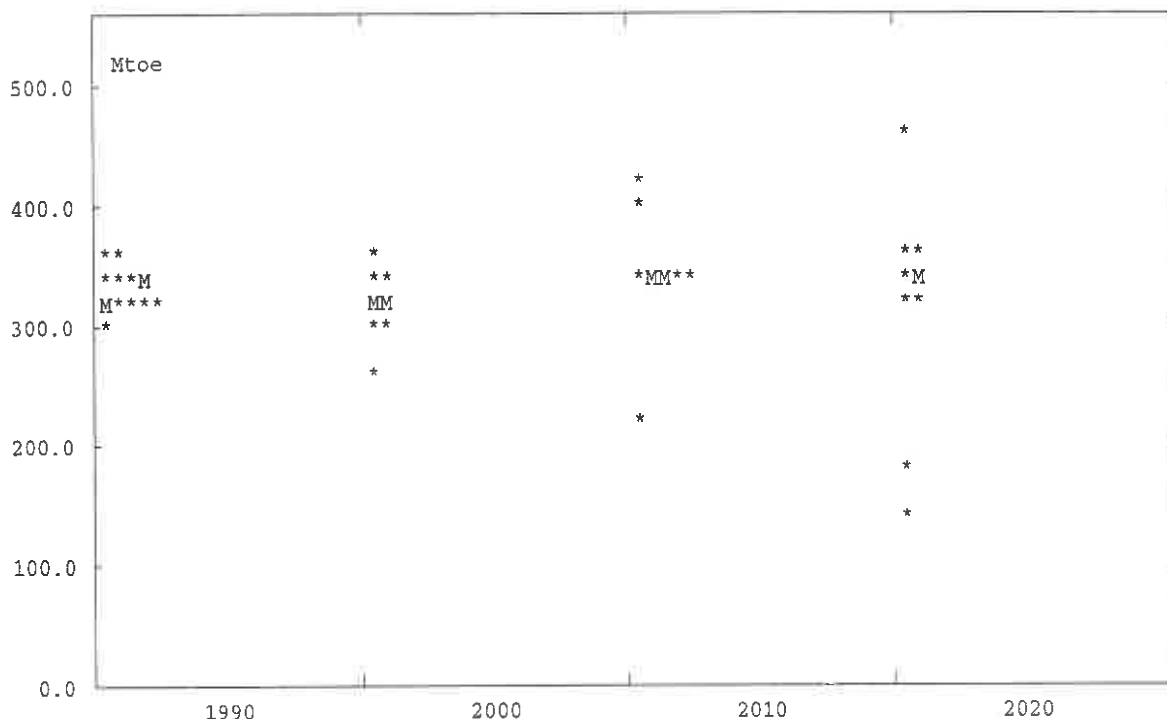
Medians:	1990	2000	2010	2020
NEREF'94	158.0	216.0	264.2	321.3
ECSB '95	157.1	215.3	260.1	317.4
ECSC '95	157.1	212.1	226.6	278.9
ECSA '95	157.1	200.4	215.0	199.7
DRI '93	157.0	190.3	217.3	106.2
OWREF'95	155.4	186.9	196.6	

Natural Gas Imports - Exports, OECD Europe



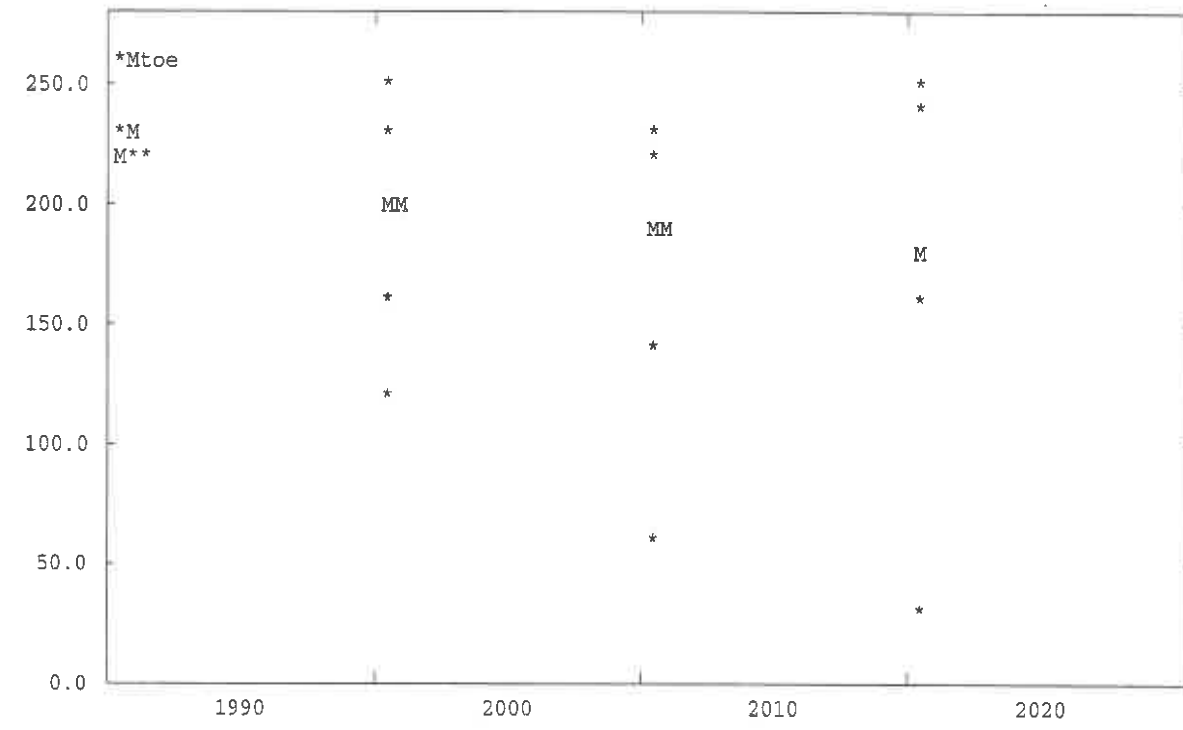
	1990	2000	2010	2020
Medians:	72.2	117.6	157.8	225.8
NEREF '94	77.4	131.6	203.1	284.4
OWREF '95	73.9	117.6	187.0	254.8
ECSC '95	72.2	117.6	165.5	225.8
ECSA '95	72.2	117.6	150.1	188.8
ECSB '95	72.2	97.0	133.8	118.7
DRI '93	72.0	0.0	0.0	

Coal Consumption, OECD Europe



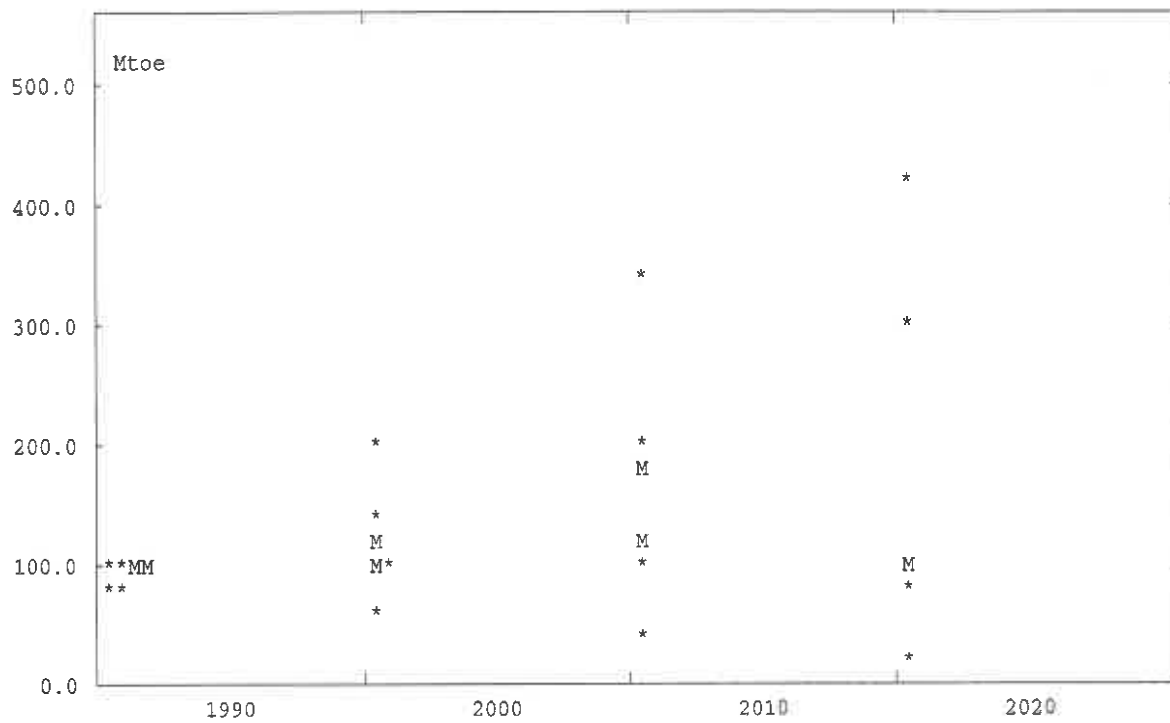
Medians:	1990	2000	2010	2020
IEA '94	353.0	357.2	418.0	458.1
DRI '93	353.0	348.0	391.1	369.0
WECB '93	333.0	333.2	349.0	352.0
WECB1'93	333.0	323.5	348.1	346.0
WECA '93	333.0	313.0	336.5	337.7
WECC '93	333.0	307.3	336.0	326.0
OWREF'95	325.6	307.0	331.5	322.0
ECSA '95	315.9	262.5	227.9	178.9
ECSB '95	315.9			147.0
ECSC '95	315.9			
NEREF'94	313.2			
EIA '95	296.0			

Coal Production, OECD Europe



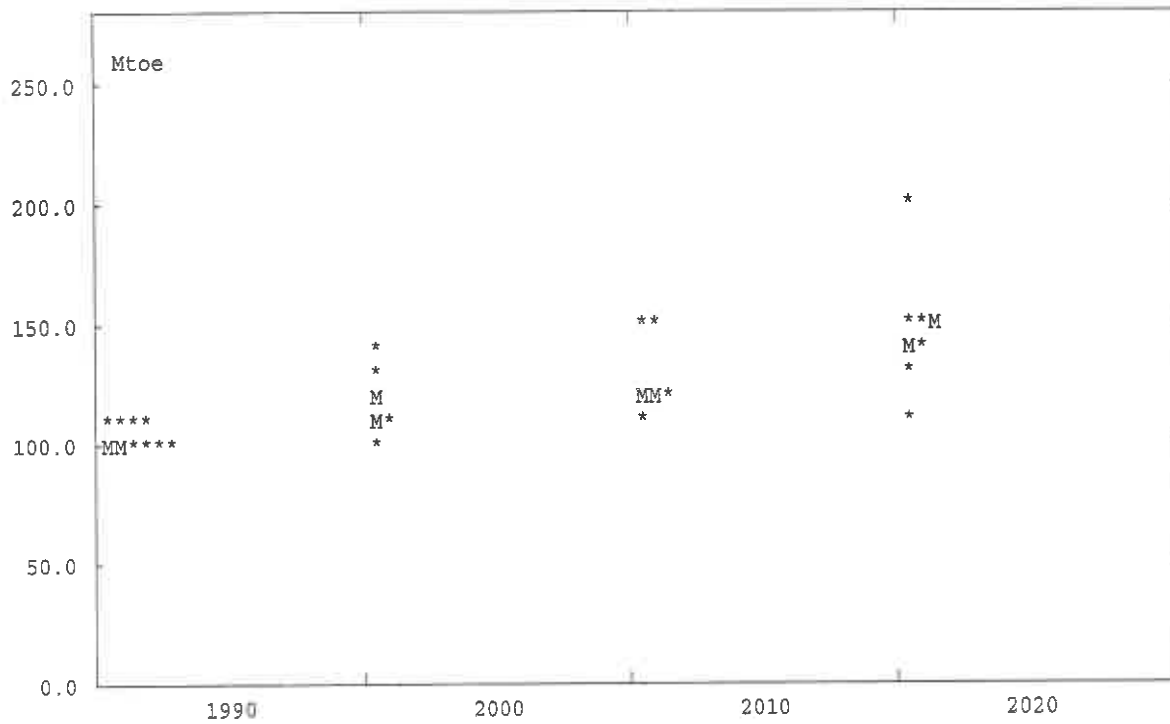
Medians:	1990	2000	2010	2020
DRI '93	259.0	246.4	229.6	248.6
NEREF '94	234.6	226.1	223.7	241.9
OWREF '95	231.8	204.1	192.2	177.5
ECSA '95	218.3	196.9	191.8	158.0
ECSB '95	218.3	162.0	144.0	29.3
ECSC '95	218.3	117.3	58.7	

Coal Imports - Exports, OECD Europe



	1990	2000	2010	2020
Medians:	95.8	109.0	155.7	104.1
ECSA '95	97.5 NEREF'94	206.2 NEREF'94	332.4 NEREF'94	428.8
ECSB '95	97.5 OWREF'95	135.2 OWREF'95	204.6 OWREF'95	291.0
ECSC '95	97.5 ECSA '95	110.8 DRI '93	187.0 ECSB '95	104.1
OWREF'95	94.1 ECSB '95	107.1 ECSA '95	124.4 ECSA '95	77.4
DRI '93	88.0 DRI '93	97.0 ECSB '95	106.9 ECSC '95	20.9
NEREF'94	78.6 ECSC '95	58.4 ECSC '95	35.6	

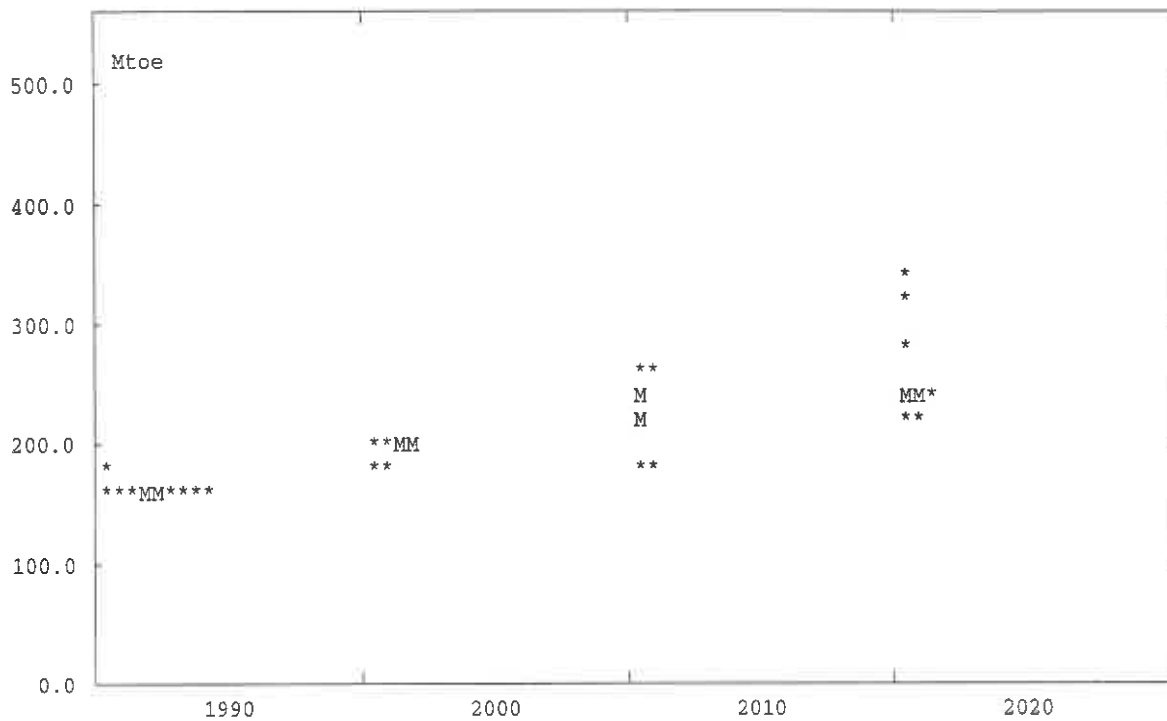
Renewables, Electric, OECD Europe



	1990	2000	2010	2020
Medians:	101.3	111.1	120.5	145.3
EIA '95	111.0	142.2	154.1	196.1
ECSA '95	108.7	125.0	146.0	149.0
ECSB '95	108.7	115.0	123.0	149.0
ECSC '95	108.7	107.2	118.0	148.0
NEREF'94	103.7	106.5	117.9	142.6
WECB1'93	99.0	102.0	111.4	137.2
WECA '93	99.0			126.3
WECB '93	99.0			114.0
WECC '93	99.0			
IEA '94	98.0			

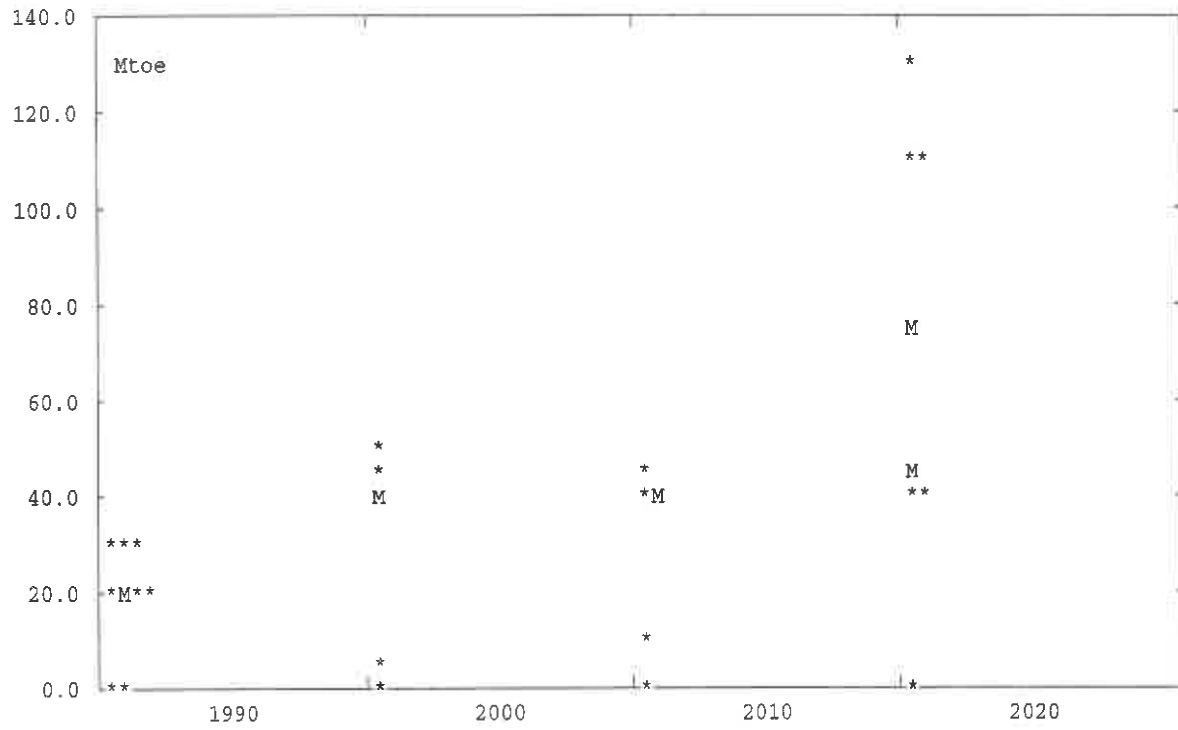


Nuclear Energy, OECD Europe



Medians:	1990	2000	2010	2020
NEREF '94	180.4	194.9	261.9	331.7
EIA '95	169.0	194.9	258.7	320.6
WECB1 '93	169.0	194.8	238.9	277.6
WECA '93	169.0	193.0	218.2	249.0
WECB '93	169.0	188.0	183.0	244.0
WECC '93	169.0	187.0	182.0	244.0
ECSB '95	166.3			224.0
ECSA '95	166.3			218.2
ECSC '95	166.3			
IEA '94	166.0			

Renewables, Nonelectric, OECD Europe

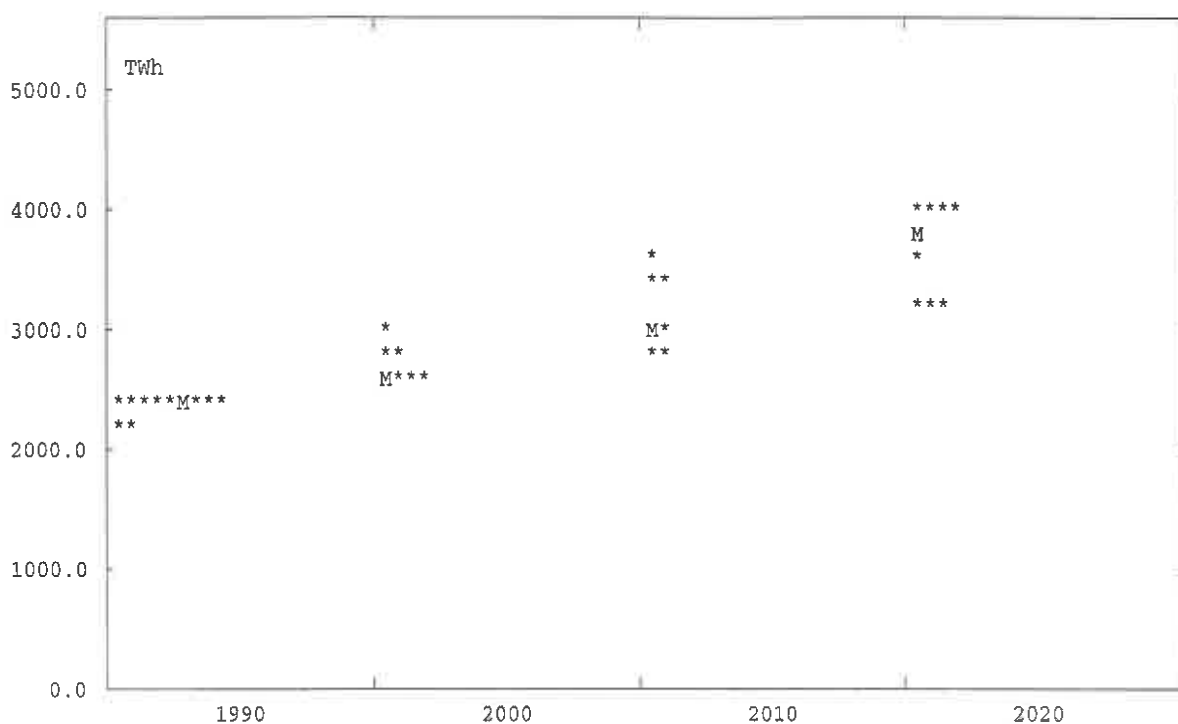


Medians:

Year	1990	2000	2010	2020
Medians:	19.0	38.1	39.4	58.4

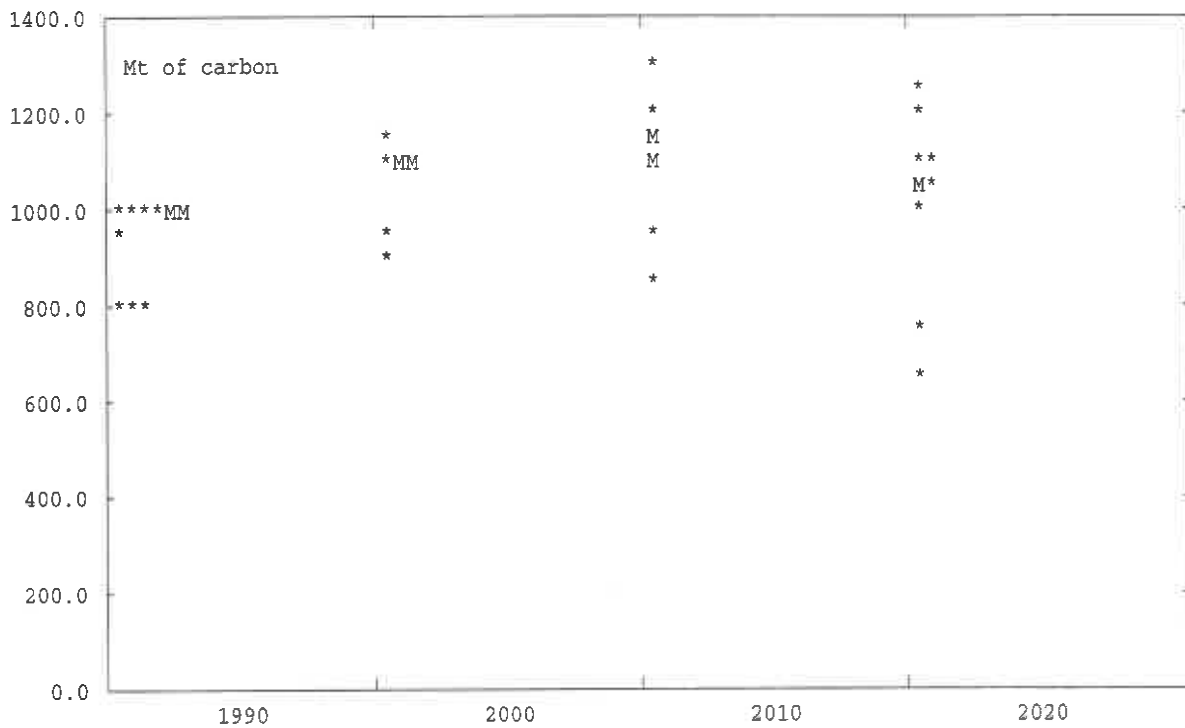
ECSA '95	30.8	ECSA '95	50.5	ECSA '95	42.6	WECC '93	131.0
ECSB '95	30.8	ECSB '95	43.6	ECSB '95	39.4	WECB1'93	109.0
ECSC '95	30.8	ECSC '95	38.1	ECSC '95	39.4	WECA '93	109.0
WECB '93	19.0	IEA '94	7.0	IEA '94	11.0	WECB '93	73.0
WECB1'93	19.0	NEREF'94	0.0	NEREF'94	0.0	ECSA '95	43.8
WECA '93	19.0					ECSB '95	40.5
WECC '93	19.0					ECSC '95	40.5
IEA '94	1.0					NEREF'94	0.0
NEREF'94	0.0						

Electricity Generation, OECD Europe



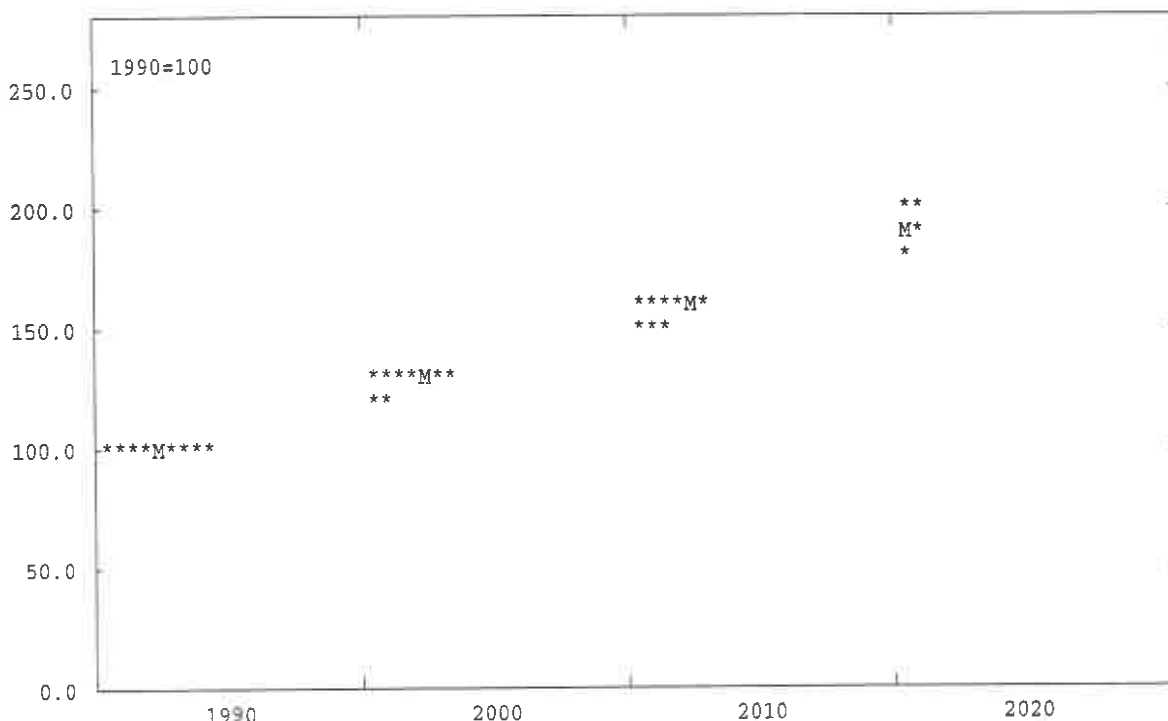
Medians:	2367.6	2660.0	3091.0	3836.1			
WECB1'93	2468.4	ECSA '95	2929.3	IEA '94	3661.0	ECSA '95	4082.6
WECA '93	2468.4	IEA '94	2897.0	ECSA '95	3434.1	WECA '93	4048.0
WECB '93	2468.4	ECSB '95	2836.8	ECSB '95	3302.3	WECB1'93	3900.0
WECC '93	2468.4	DRI '93	2660.0	DRI '93	3091.0	WECB '93	3900.0
IEA '94	2379.0	ECSC '95	2659.6	NEREF'94	2988.3	ECSB '95	3836.1
ECSA '95	2367.6	OWREF'95	2543.3	OWREF'95	2857.2	NEREF'94	3589.3
ECSB '95	2367.6	NEREF'94	2521.8	ECSC '95	2851.6	WECC '93	3214.0
ECSC '95	2367.6					OWREF'95	3154.8
DRI '93	2333.0					ECSC '95	3153.0
OWREF'95	2272.6						
NEREF'94	2263.6						

Carbon Emissions, OECD Europe



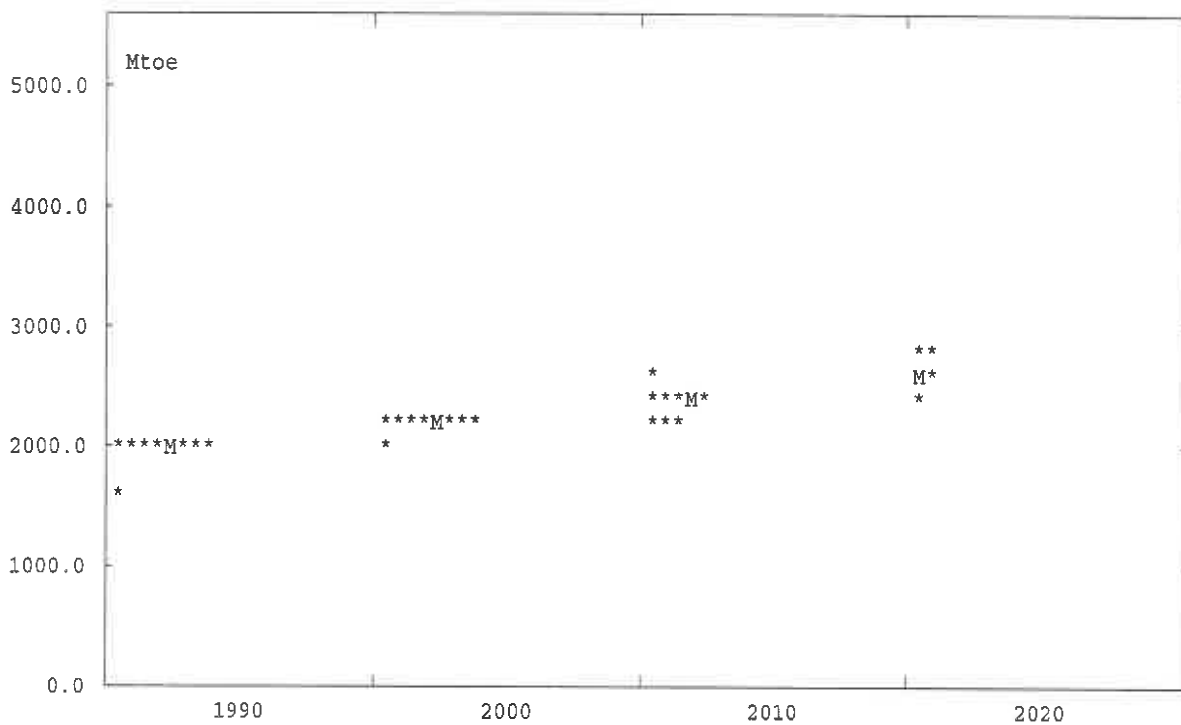
Medians:	1990	2000	2010	2020
WECA '93	1001.1	1155.0	1288.0	1256.3
WECA '93	1001.1	1116.8	1183.7	1175.3
WECA '93	1001.1	1082.9	1174.4	1096.8
WECC '93	1001.1	1079.7	1095.5	1083.2
EIA '95	997.0	952.9	974.8	1058.0
OWREF '95	995.7	919.2	861.4	1031.1
NEREF '94	942.5			1019.8
ECSA '95	805.7			742.3
ECSB '95	798.8			647.7
ECSC '95	795.5			

Real GNP (or GDP), USA



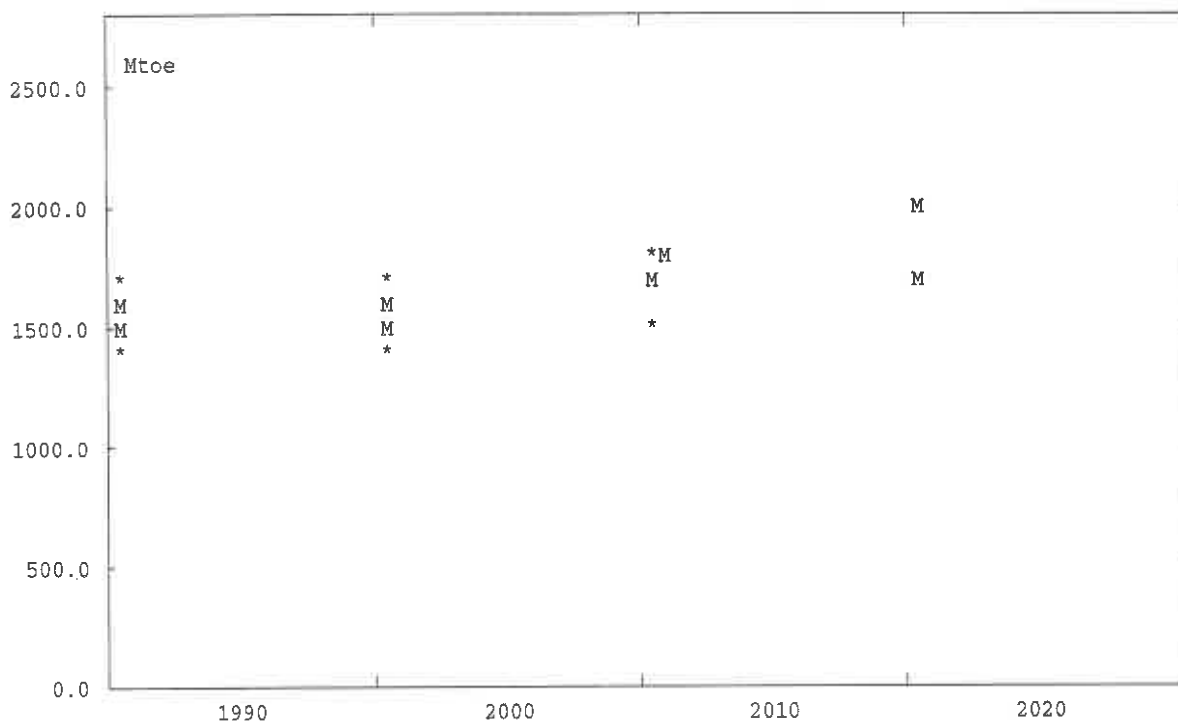
Medians:	1990	2000	2010	2020
AMOCN'93	100.0	129.1	162.0	201.2
BNREF'95	100.0	128.7	161.0	196.3
AMOCN'93	100.0	128.2	160.3	192.0
EIA '95	100.0	128.0	157.4	186.0
GRI '93	100.0	127.0	157.1	183.0
GRREF'93	100.0	125.0	157.0	
ITREF'93	100.0	125.0	154.0	
CWREF'93	100.0	124.0	153.0	
MERGE'95	100.0	124.0	152.0	

Total PE Consumption, USA



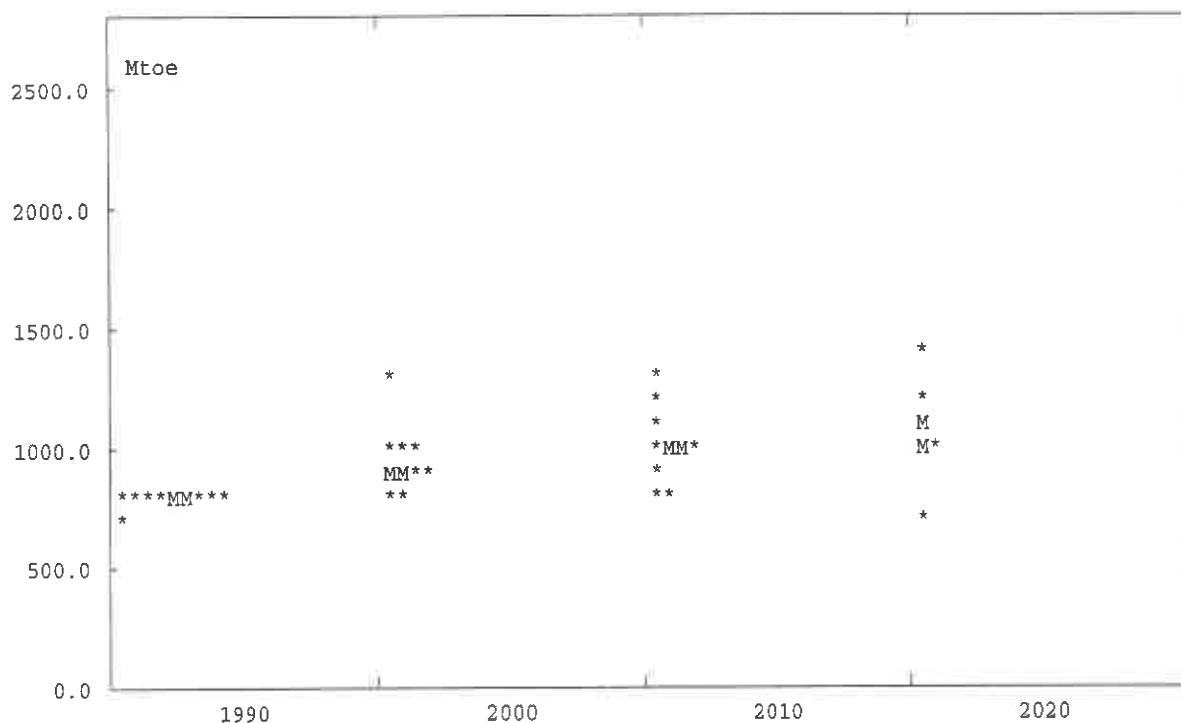
Medians:	1990	2000	2010	2020
ENREF'95	2014.9	2278.0	2526.0	2840.8
MERGE'95	1982.1	2224.0	2463.0	2723.0
EIA '95	1982.0	2199.7	2442.0	2688.5
GRI '93	1978.2	2189.9	2429.8	2546.9
AMOCL'93	1971.0	2175.8	2401.0	2478.1
AMOC'93	1971.0	2162.0	2356.2	
CWREF'93	1938.0	2146.0	2280.1	
ITREF'93	1926.6	2121.8	2278.8	
GRREF'93	1689.9	1932.4	2259.0	

Total PE Production, USA



Medians:	1559.6	1570.8	1750.6	1836.5			
EIA '95	1670.0	EIA '95	1658.0	GRI '93	1806.5	GRREF'93	1987.1
ENREF'95	1637.2	GRI '93	1641.8	EIA '95	1784.0	BNREF'95	1686.0
GRI '93	1481.9	GRREF'93	1499.8	GRREF'93	1717.2		
GRREF'93	1444.8	BNREF'95	1366.8	BNREF'95	1519.9		

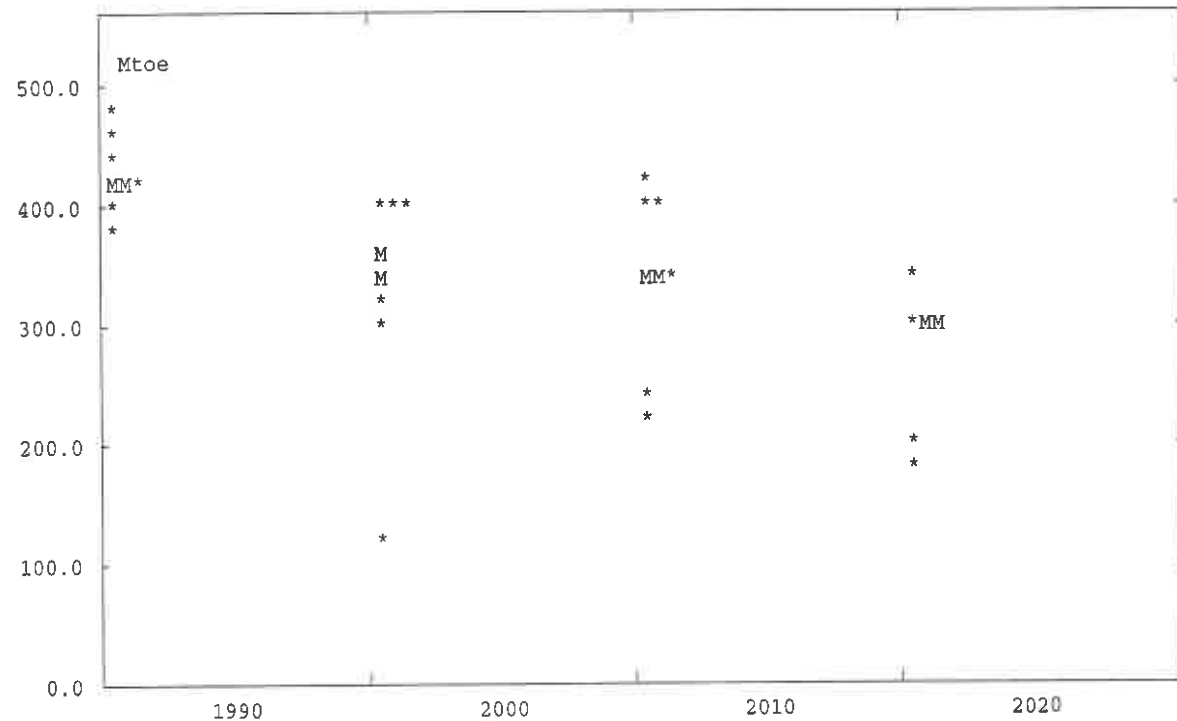
Oil Consumption, USA



Medians:	1990	2000	2010	2020			
BNREF'95	841.8	ITREF'93	1250.2	MERGE'95	1307.2	MERGE'95	1409.8
CWREF'93	825.0	MERGE'95	1025.4	ITREF'93	1207.4	LYNCH'94	1186.7
MERGE'95	807.0	LYNCH'94	997.1	LYNCH'94	1128.9	BNREF'95	1109.8
GRI '93	790.3	CWREF'93	957.0	BNREF'95	1036.1	ITREF'93	1023.1
EIA '95	788.0	BNREF'95	936.3	CWREF'93	1021.0	CWREF'93	1023.0
LYNCH'94	778.9	AMOCH'93	903.0	AMOCH'93	1018.0	GRREF'93	705.8
ITREF'93	768.5	EIA '95	867.0	EIA '95	960.0		
AMOCL'93	757.0	GRI '93	851.5	GRI '93	903.2		
AMOCH'93	757.0	AMOCL'93	778.0	GRREF'93	846.7		
GRREF'93	667.9	GRREF'93	773.5	AMOCL'93	802.0		

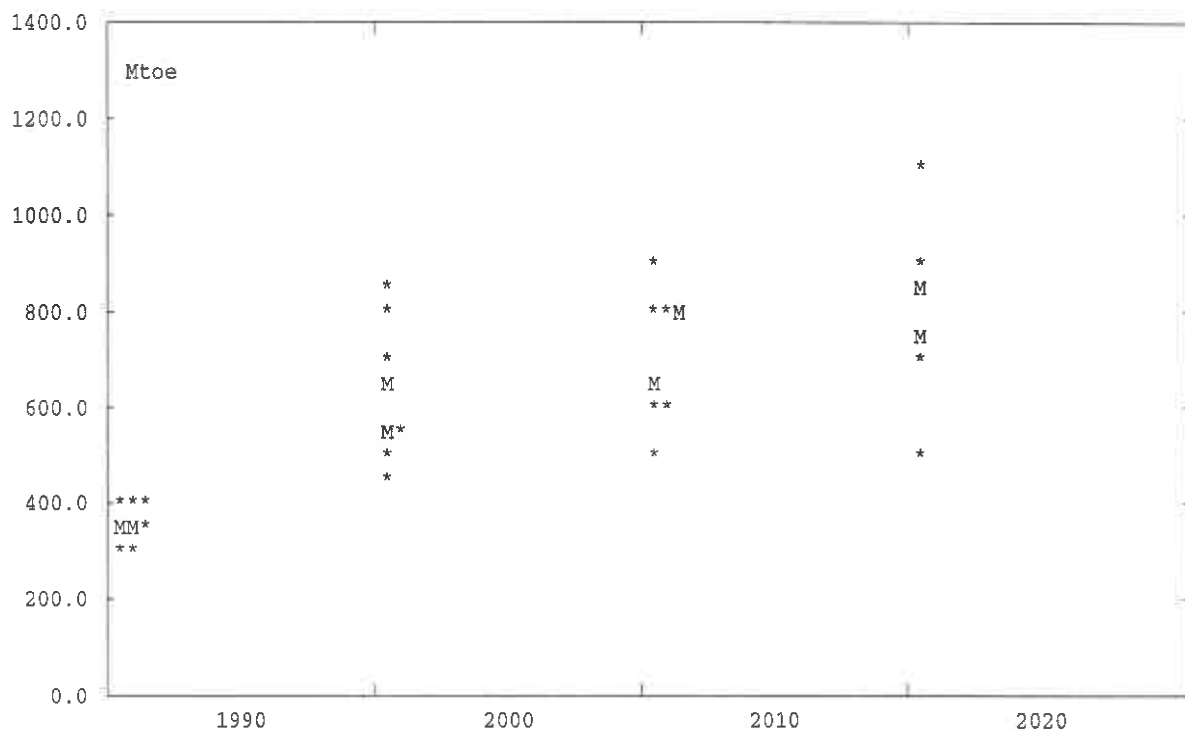


Oil Production, USA



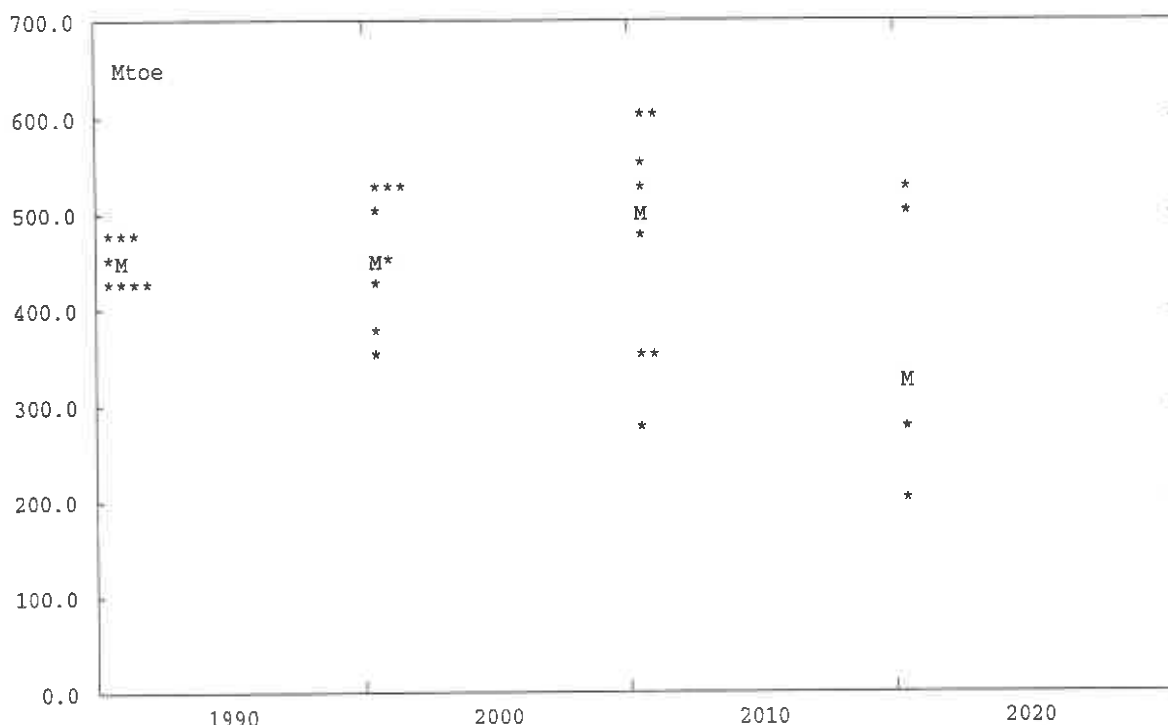
Medians:	1990	2000	2010	2020
GRI '93	473.1	406.1	425.3	341.5
EIA '95	465.0	401.0	401.0	309.3
BNREF'95	439.5	394.4	392.1	303.8
LYNCH'94	417.6	359.0	347.0	296.0
ITREF'93	413.6	341.3	341.5	201.3
MERGE'95	413.6	327.0	335.0	184.6
CWREF'93	409.0	296.9	231.6	
GRREF'93	385.5	119.7	227.1	

Oil Imports - Exports, USA



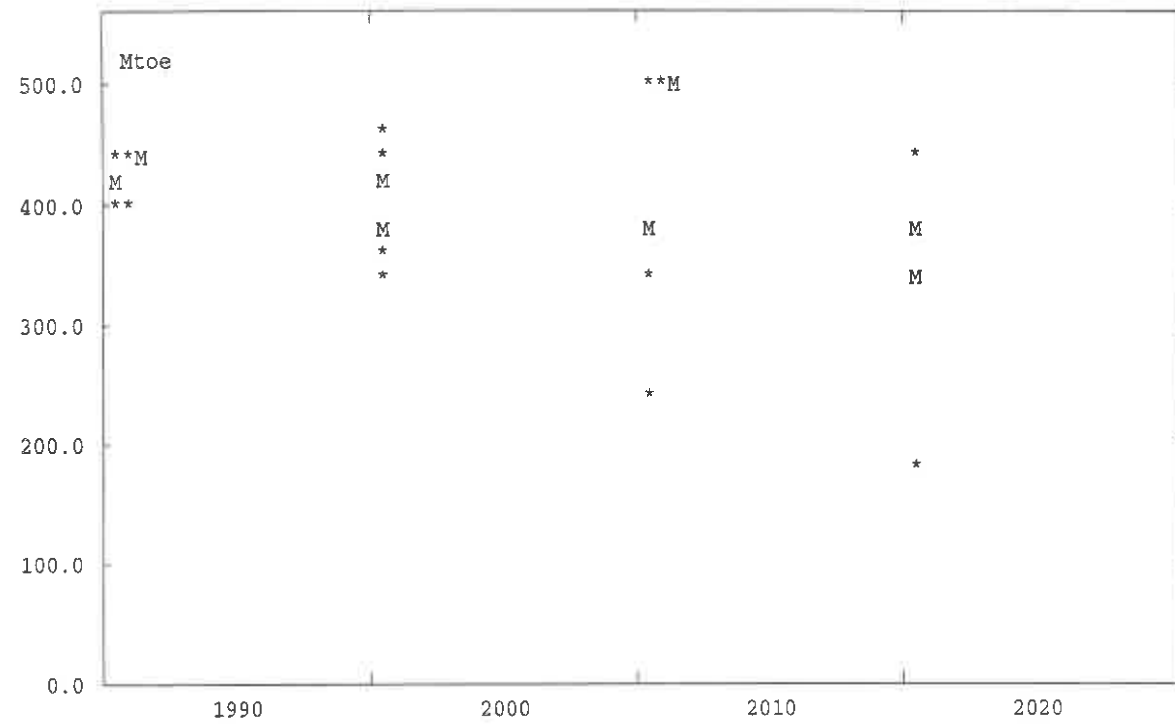
	1990	2000	2010	2020			
Medians:	358.1	596.5	730.7	786.1			
CWREF'93	416.0	ITREF'93	844.1	MERGE'95	906.2	MERGE'95	1100.6
BNREF'95	402.3	BNREF'95	816.6	ITREF'93	815.2	BNREF'95	908.5
MERGE'95	393.4	MERGE'95	684.1	BNREF'95	809.0	LYNCH'94	845.2
LYNCH'94	361.3	LYNCH'94	638.1	LYNCH'94	787.4	CWREF'93	727.0
ITREF'93	354.9	CWREF'93	555.0	CWREF'93	674.0	ITREF'93	719.4
EIA '95	338.0	EIA '95	525.0	GRREF'93	615.2	GRREF'93	521.2
GRI '93	317.2	GRREF'93	476.6	EIA '95	612.0		
GRREF'93	282.4	GRI '93	457.1	GRI '93	477.9		

Natural Gas Consumption, USA



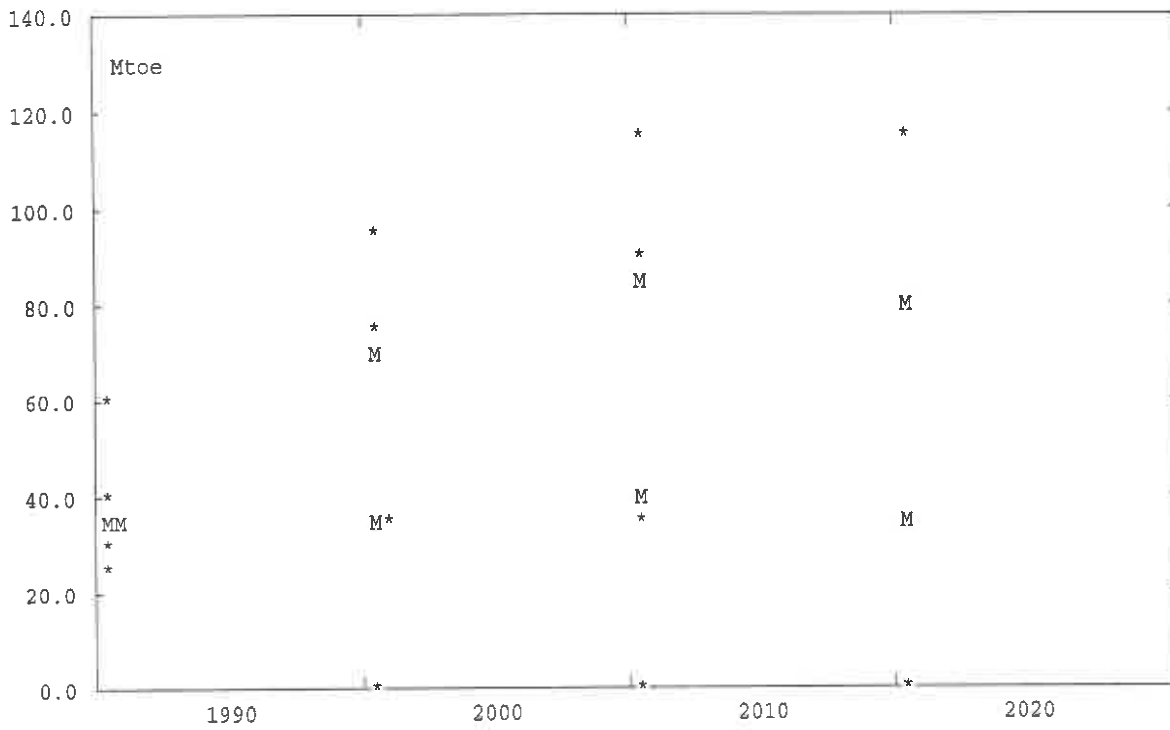
Medians:	1990	2000	2010	2020			
MERGE'95	479.4	GRI '93	536.3	GRI '93	611.6	GRREF'93	520.3
ITREF'93	477.0	EIA '95	536.0	EIA '95	595.0	BNREF'95	493.3
BNREF'95	466.8	AMOCL'93	513.0	GRREF'93	540.7	ITREF'93	335.5
GRI '93	453.8	AMOCH'93	505.0	AMOCL'93	515.0	CWREF'93	276.0
EIA '95	453.0	GRREF'93	459.5	AMOCH'93	495.0	MERGE'95	210.9
AMOCL'93	436.0	BNREF'95	459.3	BNREF'95	466.0		
AMOCH'93	436.0	CWREF'93	415.0	CWREF'93	350.0		
CWREF'93	433.0	MERGE'95	376.9	ITREF'93	339.6		
GRREF'93	416.0	ITREF'93	354.4	MERGE'95	284.5		

Natural Gas Production, USA



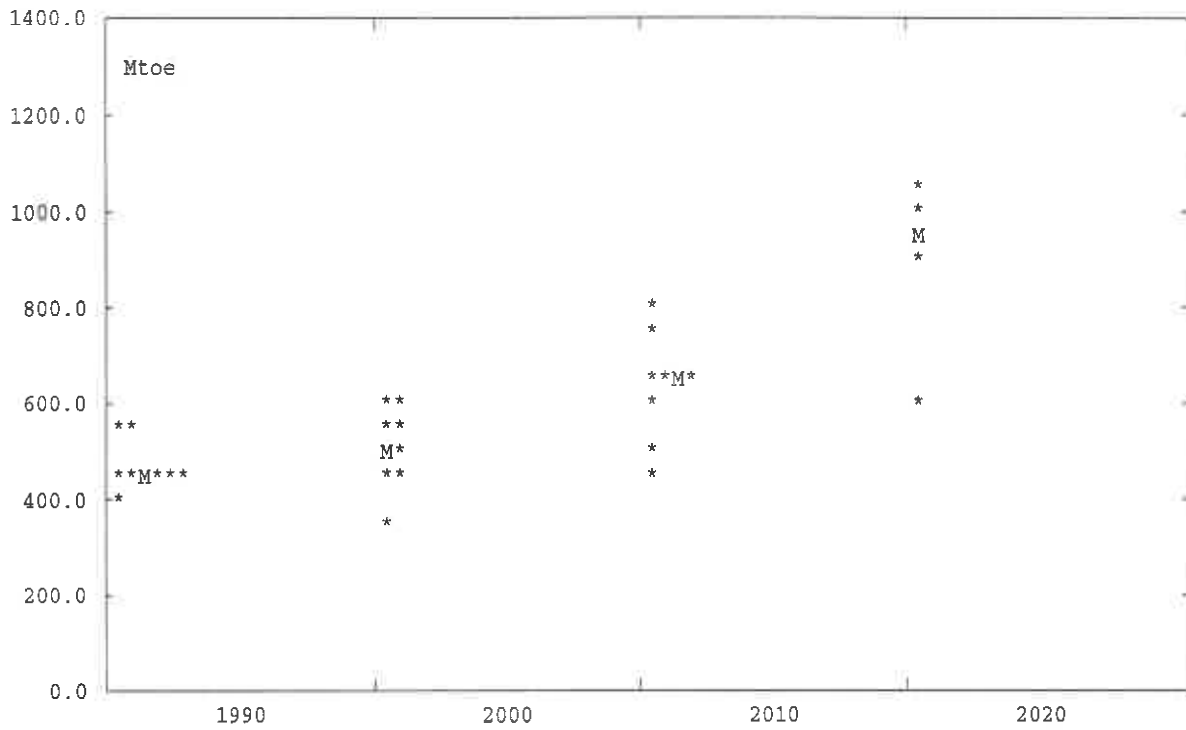
Medians:	1990	2000	2010	2020
ITREF'93	446.5	462.0	506.0	441.1
MERGE'95	444.1	441.9	500.5	378.1
EIA '95	435.0	426.0	496.2	335.5
BNREF'95	429.0	385.9	374.1	175.6
GRI '93	391.6	354.4	339.6	
GRREF'93	390.0	341.7	249.3	

Natural Gas Imports - Exports, USA



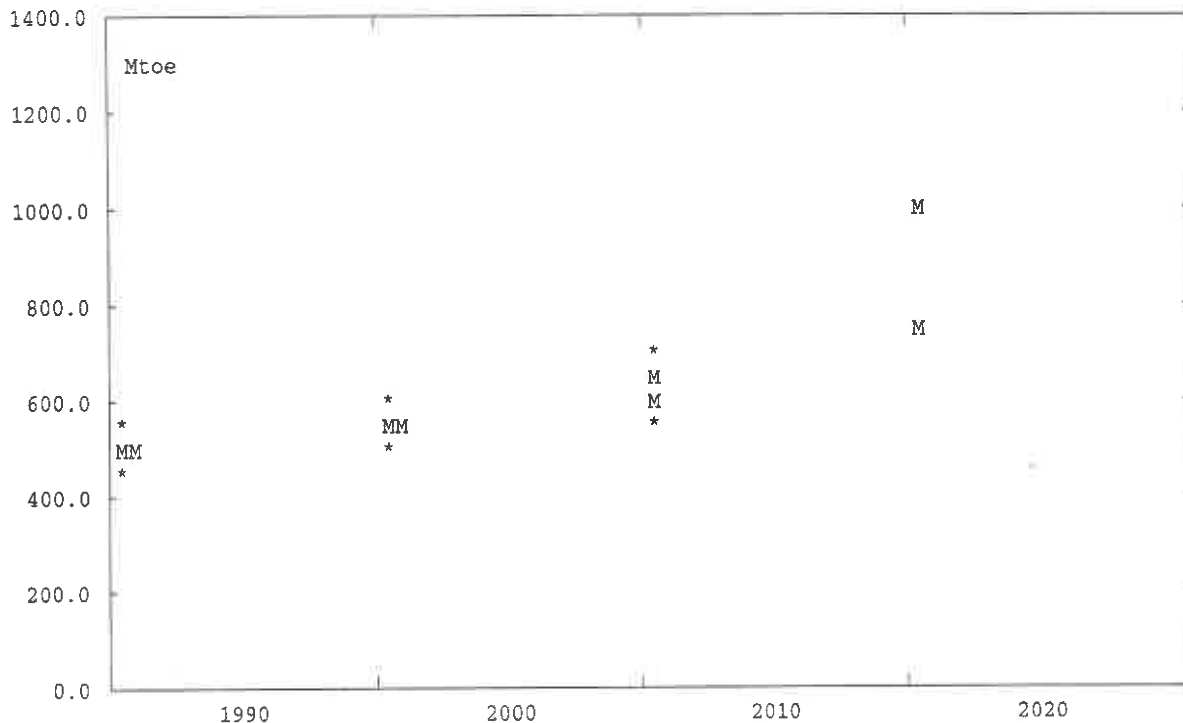
Medians:	1990	2000	2010	2020
GRI '93	62.2	94.4	115.4	115.2
BNREF'95	37.8	73.4	91.9	79.2
MERGE'95	35.2	70.0	86.0	35.2
EIA '95	34.0	35.2	40.2	0.0
ITREF'93	30.5	33.4	35.2	
GRREF'93	26.0	0.0	0.0	

Coal Consumption, USA



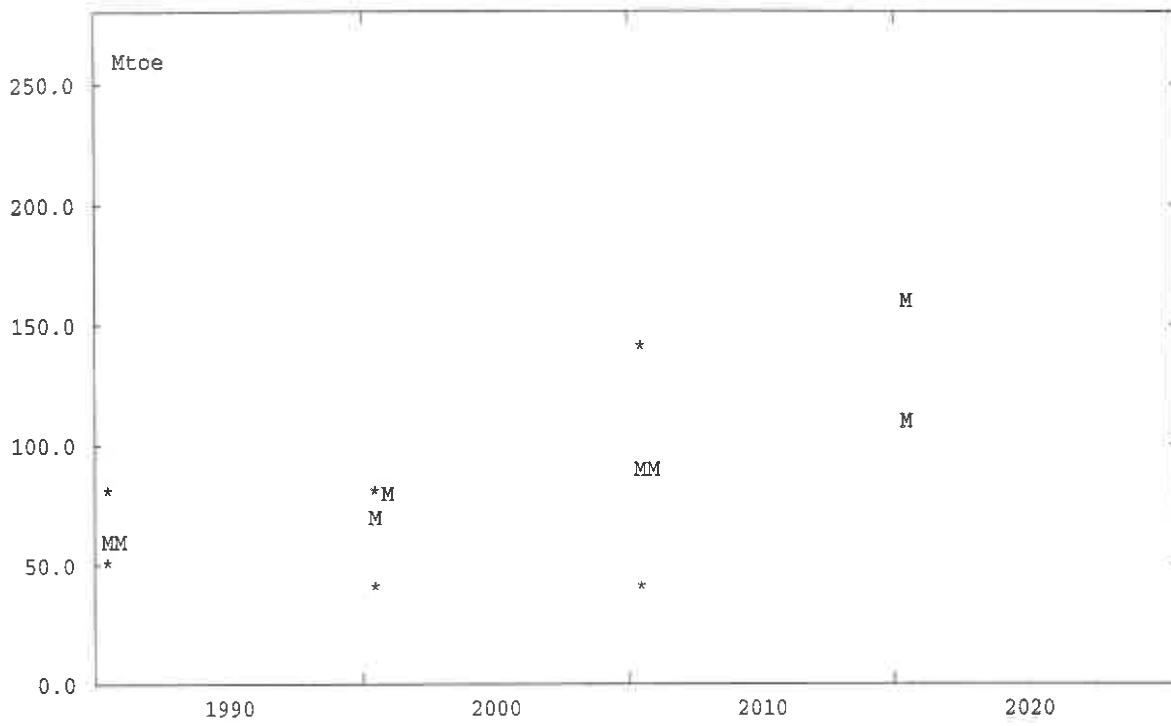
Medians:	1990	2000	2010	2020
AMOCH'93	530.0	622.0	777.0	1039.9
AMOCL'93	530.0	596.0	757.0	1008.0
MERGE'95	472.4	574.0	661.0	963.4
ITREF'93	467.4	569.0	642.7	881.9
CWREF'93	465.0	502.9	637.8	588.5
EIA '95	449.0	482.2	626.8	
GRI '93	446.9	474.0	583.3	
GRREF'93	435.7	450.3	517.0	
BNREF'95	405.0	339.1	425.0	

Coal Production, USA



Medians:	1990	2000	2010	2020
EIA '95	528.0	580.3	720.6	991.2
GRI '93	523.4	553.2	673.7	751.3
GRREF'93	499.0	531.3	576.0	
BNREF'95	467.4	519.0	565.7	

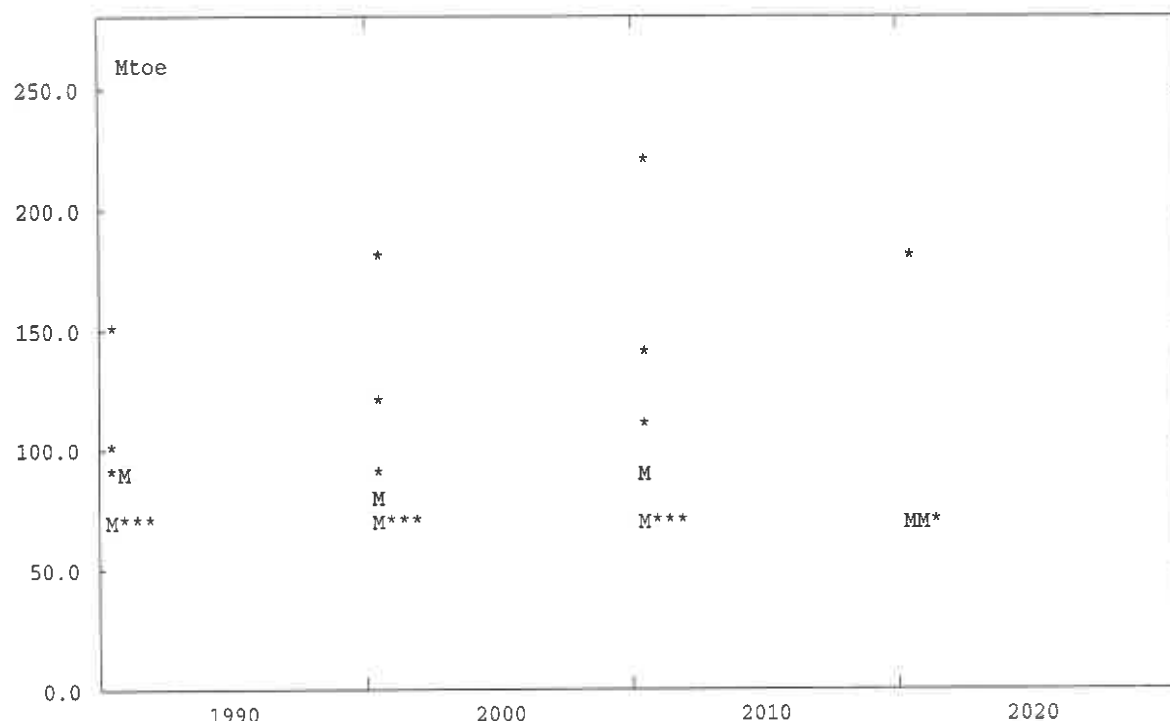
Coal Exports - Imports, USA



	1990	2000	2010	2020
Medians:	62.9	74.2	92.1	136.1
GRI '93	76.5 B NREF'95	81.0 B NREF'95	140.7 B NREF'95	162.8
GRREF'93	63.3 GRREF'93	77.4 GRREF'93	93.8 GRREF'93	109.4
BNREF'95	62.4 GRI '93	71.0 GRI '93	90.4	
EIA '95	46.0 EIA '95	36.0 EIA '95	44.0	

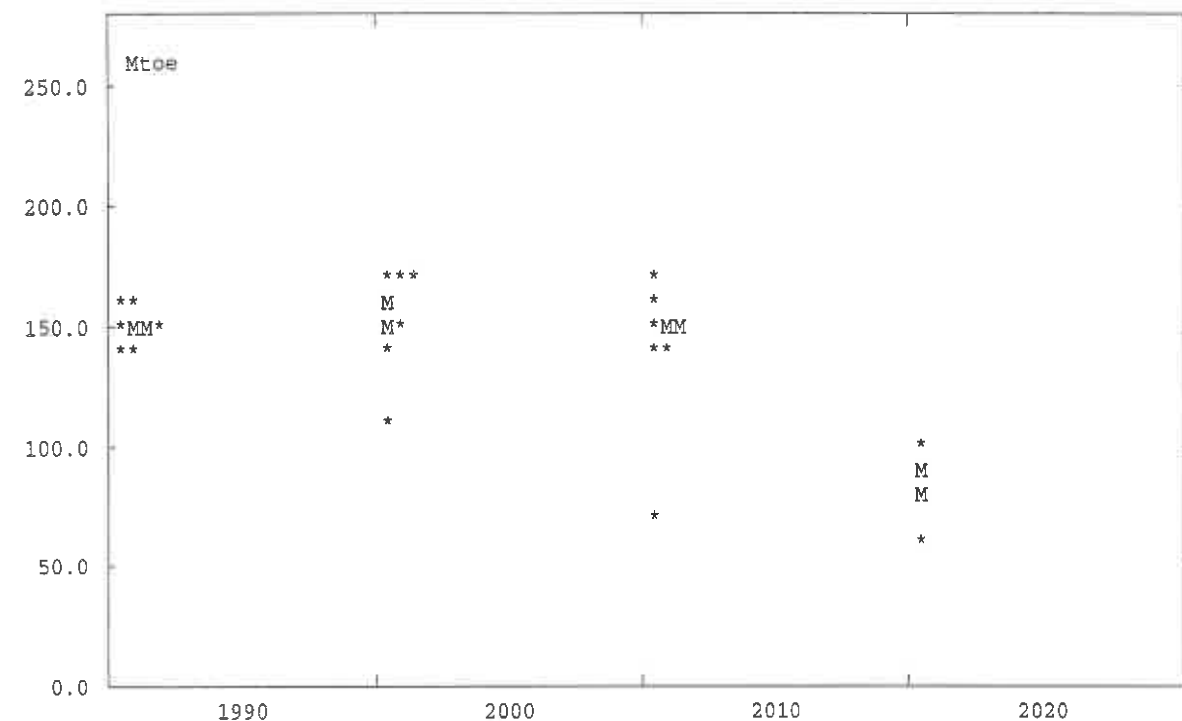


Renewables, Electric, USA



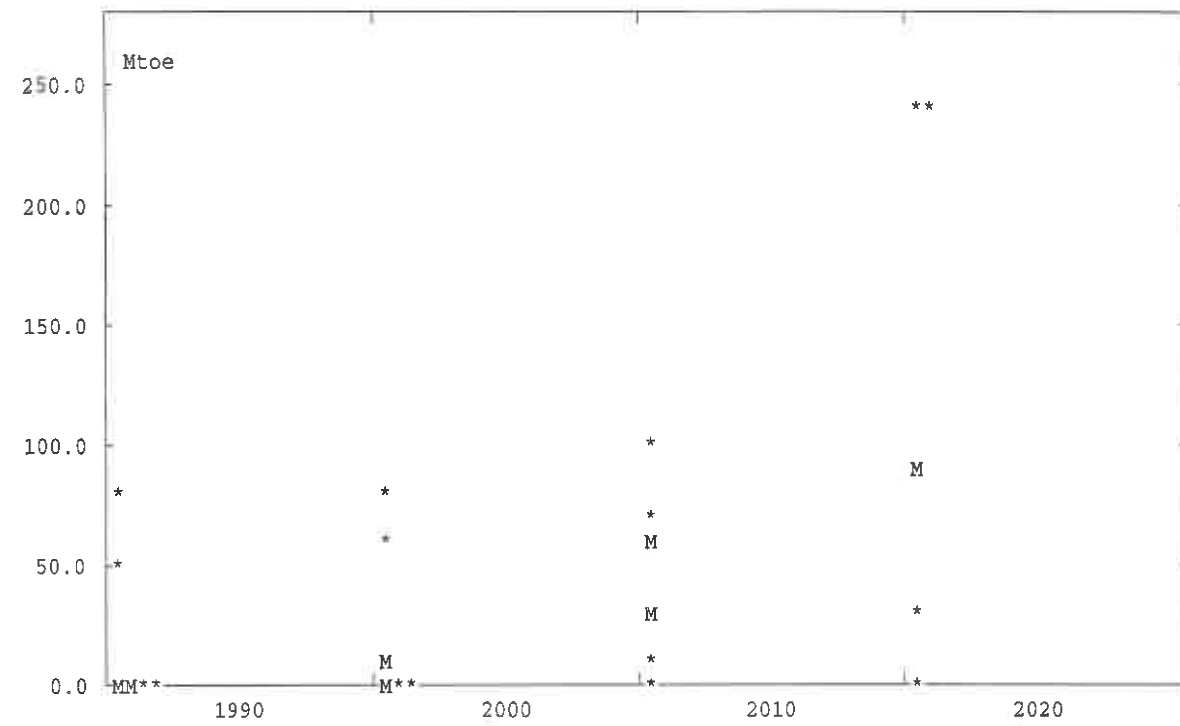
	1990	2000	2010	2020
Medians:	80.5	77.5	82.0	71.7
EIA '95	146.0	EIA '95 184.0	EIA '95 221.0	ENREF'95 176.6
BNREF'95	100.2	BNREF'95 116.6	BNREF'95 140.2	CWREF'93 72.0
AMOC'93	89.0	AMOC'93 92.0	AMOC'93 113.0	ITREF'93 71.3
AMOC'93	89.0	AMOC'93 83.0	AMOC'93 92.0	MERGE'95 70.6
CWREF'93	72.0	CWREF'93 72.0	CWREF'93 72.0	
ITREF'93	71.3	ITREF'93 71.3	ITREF'93 71.3	
MERGE'95	70.6	MERGE'95 70.6	MERGE'95 70.6	
GRI '93	68.2	GRI '93 68.2	GRI '93 68.2	

Nuclear Energy, USA



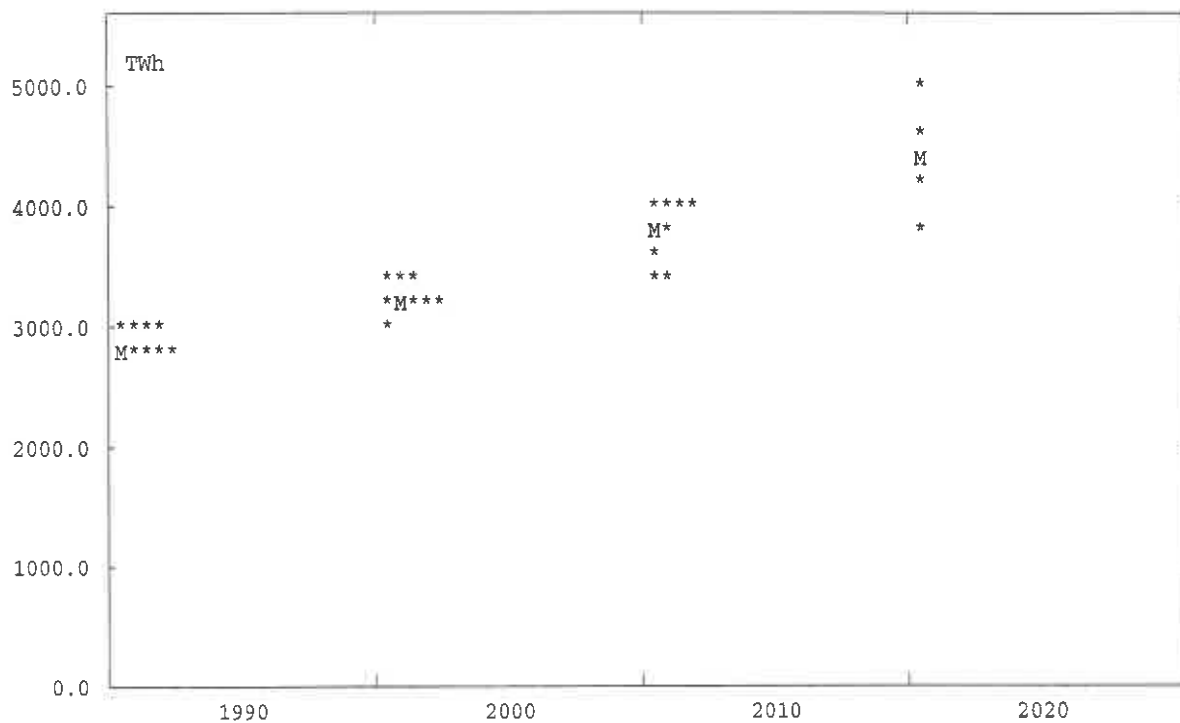
Medians:	1990	2000	2010	2020
AMOCCH'93	160.0	167.0	168.0	96.0
AMOCL'93	160.0	167.0	164.7	91.2
MERGE'95	152.7	167.0	152.7	76.5
BNREF'95	151.0	164.0	150.0	60.2
GRI '93	145.8	152.7	145.0	
EIA '95	145.0	151.1	143.0	
CWREF'93	143.0	143.0	138.0	
ITREF'93	142.4	106.8	71.3	

Renewables, Nonelectric, USA



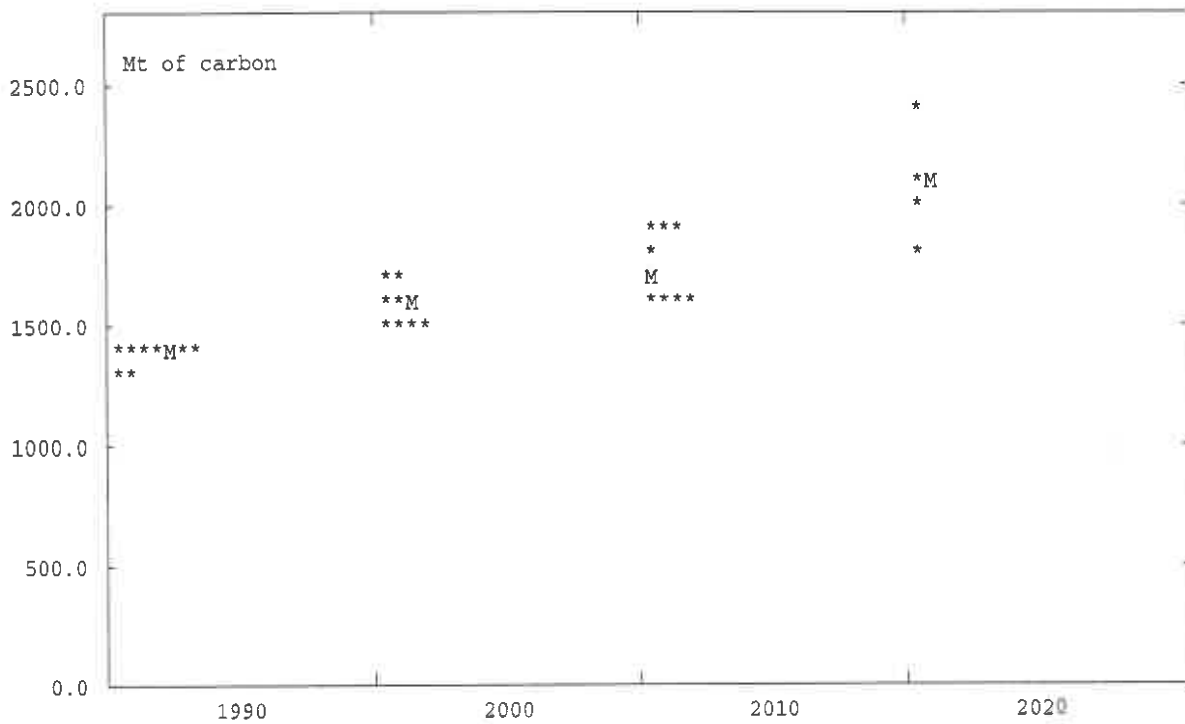
Medians:	0.0	3.0	43.2	87.5			
GRI '93	75.3	GRI '93	84.7	GRI '93	98.8	ITREF'93	235.0
BNREF'95	50.1	BNREF'95	62.2	BNREF'95	74.8	CWREF'93	235.0
GRREF'93	0.0	CWREF'93	6.0	CWREF'93	57.0	BNREF'95	87.5
ITREF'93	0.0	ITREF'93	0.0	ITREF'93	29.4	MERGE'95	33.0
CWREF'93	0.0	GRREF'93	0.0	MERGE'95	5.3	GRREF'93	0.0
MERGE'95	0.0	MERGE'95	0.0	GRREF'93	0.0		

Electricity Generation, USA



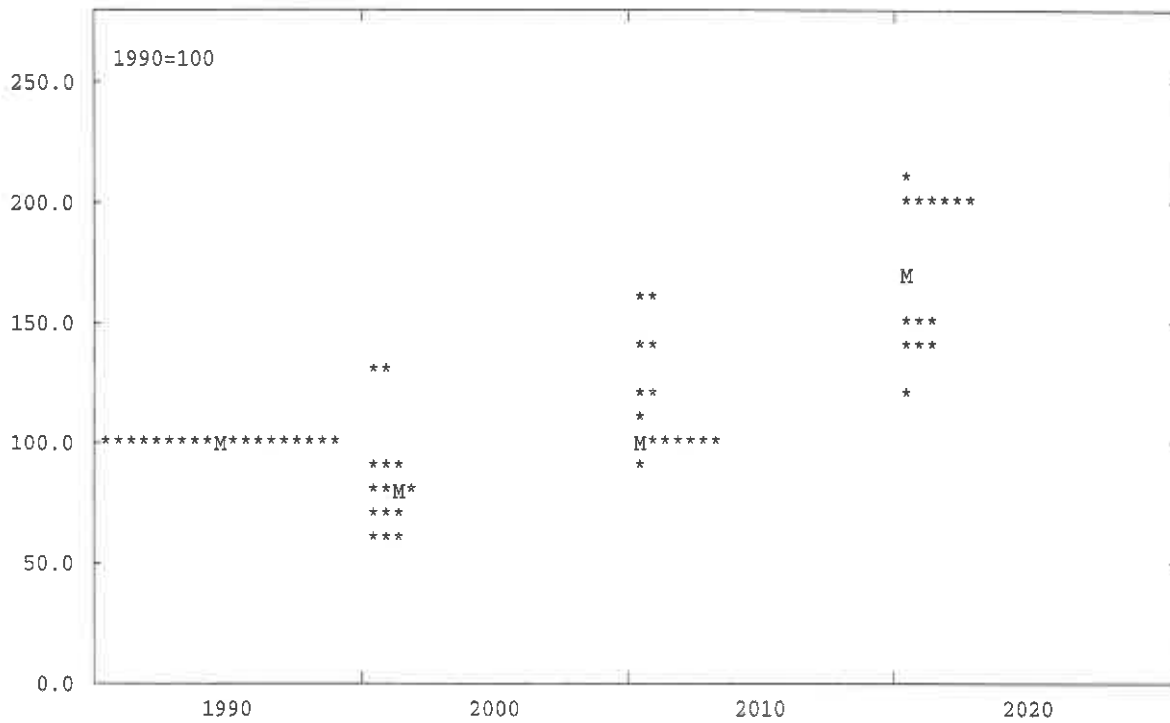
Medians:	1990	2000	2010	2020
BNREF'95	3045.0	3457.3	4081.6	4915.1
AMOCH'93	2979.0	3450.0	4000.0	4512.0
AMOCL'93	2979.0	3300.0	3919.0	4351.4
GRI '93	2901.4	3257.0	3900.0	4300.0
CWREF'93	2808.0	3251.9	3732.0	3800.0
ITREF'93	2808.0	3227.0	3722.7	
MERGE'95	2801.0	3181.0	3621.7	
GRREF'93	2778.5	3108.0	3475.0	
EIA '95	2713.0	3010.9	3397.0	

Carbon Emissions, USA



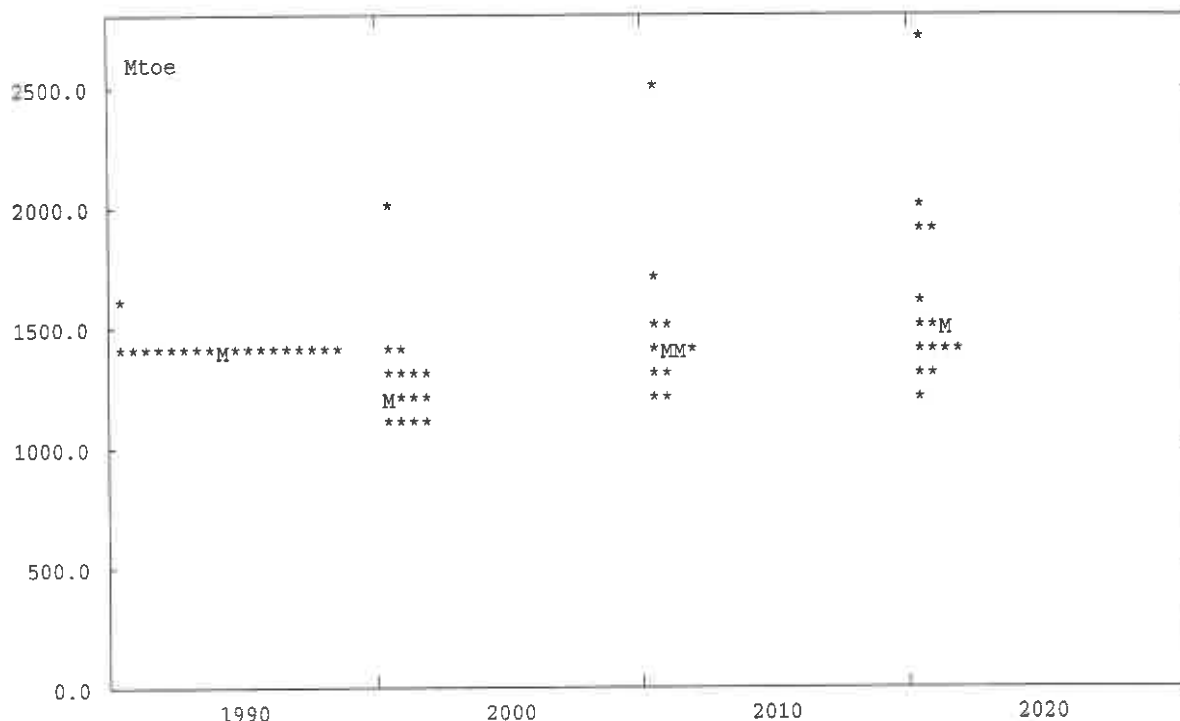
Medians:	1990	2000	2010	2020			
CWREF'93	1430.0	MERGE'95	1679.5	MERGE'95	1935.0	MERGE'95	2386.8
ITREF'93	1418.0	AMOCH'93	1669.0	AMOCH'93	1914.0	CWREF'93	2081.0
MERGE'95	1417.0	ITREF'93	1640.8	ITREF'93	1902.1	ITREF'93	2077.1
AMOCL'93	1416.0	CWREF'93	1638.0	CWREF'93	1849.0	GRREF'93	1950.9
AMOCH'93	1416.0	AMOCL'93	1550.0	GRREF'93	1731.8	BNREF'95	1847.0
GRI '93	1355.7	GRREF'93	1546.5	GRI '93	1644.0		
GRREF'93	1350.3	BNREF'95	1487.0	AMOCL'93	1637.0		
BNREF'95	1348.0	EIA '95	1471.0	EIA '95	1621.0		
EIA '95	1338.0	GRI '93	1459.4	BNREF'95	1601.0		

Real GNP (or GDP), Former USSR



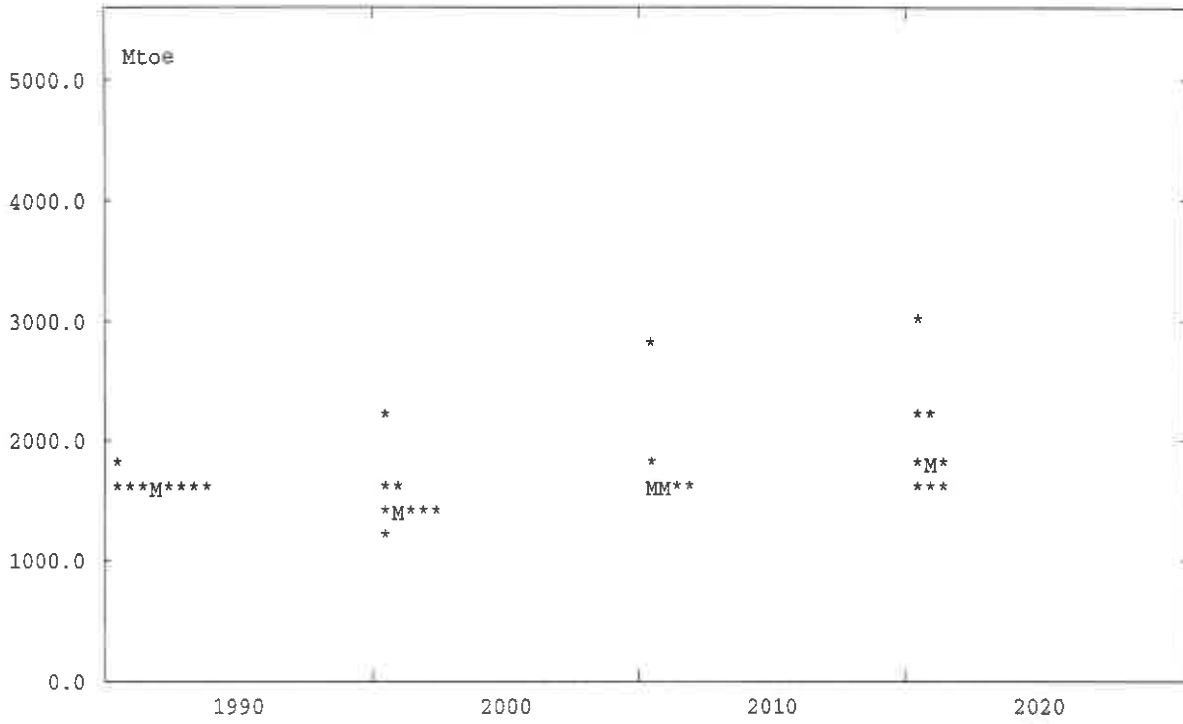
Medians:	1990	2000	2010	2020
AMOCL'93	100.0	133.9	163.5	214.6
ECSB '95	100.0	132.2	163.2	202.7
AMOCH'93	100.0	94.0	144.0	199.2
EIA '95	100.0	87.0	141.1	197.8
GRREF'93	100.0	85.0	119.0	197.8
IEA '94	100.0	76.7	116.0	197.8
ISPRE'95	100.0	76.7	111.0	197.8
ISREF'95	100.0	75.2	103.0	170.0
ISUNF'95	100.0	75.0	100.0	150.0
ITREF'93	100.0	71.3	98.1	150.0
ECSCA '95	100.0	70.0	98.1	150.0
MERGE'95	100.0	68.0	96.0	144.5
ECSC '95	100.0	60.0	96.0	140.0
SIOPT'93	100.0	60.0	96.0	136.9
SIREA'93	100.0	60.0	88.5	123.7
WECA '93	100.0			
WECB '93	100.0			
WECB1'93	100.0			
WECC '93	100.0			

Total PE Consumption, Former USSR



Medians:	1990	2000	2010	2020			
GRREF'93	1608.9	GRREF'93	2039.6	GRREF'93	2506.9	GRREF'93	2731.0
MERGE'95	1436.1	AMOCB'93	1403.0	AMOCB'93	1701.0	WECB1'93	2009.0
WECC '93	1421.0	ECSC '95	1362.5	ECSC '95	1546.0	ISUNF'95	1907.0
WECA '93	1421.0	ITREF'93	1323.8	AMOCB'93	1463.0	ECSC '95	1867.1
WECB '93	1421.0	ECSC '95	1311.0	EIA '95	1373.0	WECA '93	1644.0
WECB1'93	1421.0	SIOPT'93	1310.0	IEA '94	1366.0	SIOPT'93	1510.0
ECSC '95	1402.1	AMOCB'93	1298.0	SIOPT'93	1365.0	WECB '93	1497.0
ECSC '95	1402.1	SIREA'93	1240.0	ECSC '95	1361.3	ITREF'93	1456.1
ISUNF'95	1395.0	IEA '94	1180.0	ITREF'93	1336.6	MERGE'95	1431.7
ISPRE'95	1395.0	EIA '95	1168.0	SIREA'93	1280.0	ISREF'95	1405.0
ISREF'95	1395.0	MERGE'95	1152.2	MERGE'95	1182.4	ECSC '95	1376.8
AMOCB'93	1380.0	ISUNF'95	1108.0	ECSC '95	1179.1	SIREA'93	1365.0
AMOCB'93	1380.0	ISPRE'95	1080.0			ECSC '95	1338.8
IEA '94	1366.0	ISREF'95	1077.0			ISPRE'95	1325.0
ITREF'93	1365.4	ECSC '95	1061.8			WECC '93	1248.0
SIREA'93	1365.0						
SIOPT'93	1365.0						
EIA '95	1364.0						

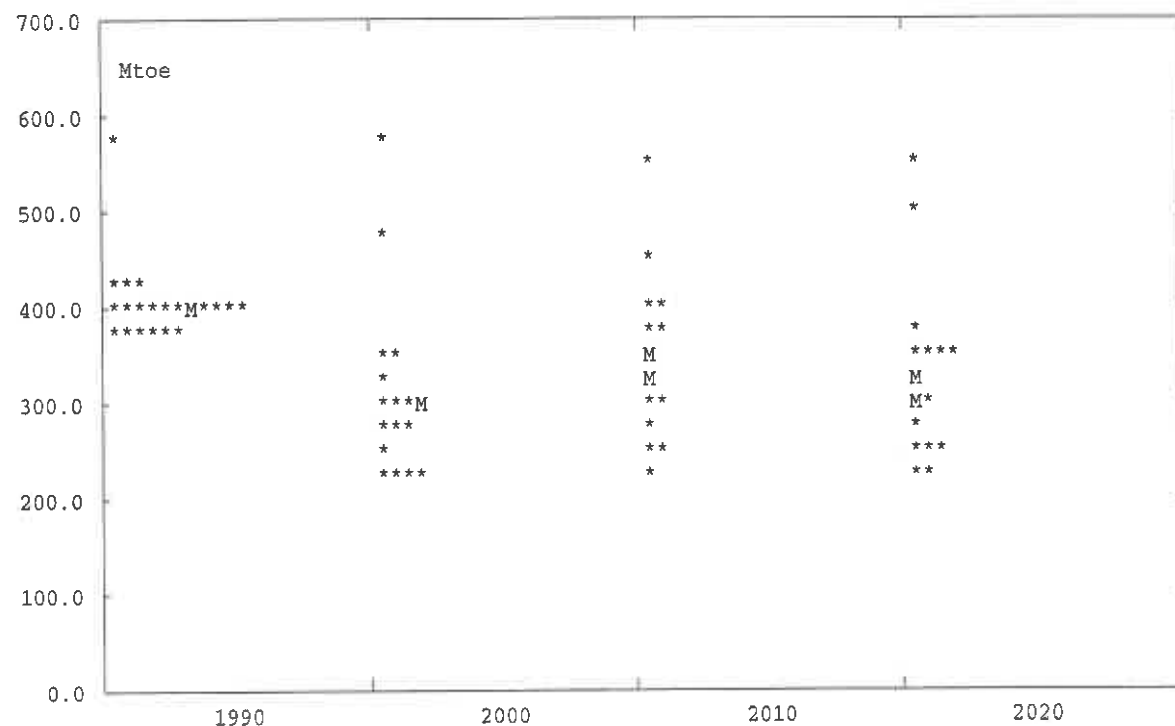
Total PE Production, Former USSR



Medians:	1990	2000	2010	2020
GRREF'93	1767.0	GRREF'93 2281.2	GRREF'93 2781.4	GRREF'93 2971.3
ECSB '95	1669.6	ECSA '95 1530.9	ECSA '95 1777.2	ISUNF'95 2172.0
ECSC '95	1669.6	SIOPT'93 1530.0	ECSC '95 1656.8	ECSA '95 2165.9
ECSA '95	1669.6	ECSC '95 1496.6	SIOPT'93 1655.0	ECSB '95 1871.2
SIREA'93	1645.0	SIREA'93 1450.0	SIREA'93 1570.0	ECSC '95 1852.1
SIOPT'93	1645.0	ISUNF'95 1338.0	ECSB '95 1522.5	SIOPT'93 1745.0
ISPREF'95	1636.5	ISPREF'95 1310.0		SIREA'93 1670.0
ISREF'95	1636.5	ISREF'95 1307.0		ISREF'95 1670.0
ISUNF'95	1636.5	ECSB '95 1287.8		ISPREF'95 1590.0

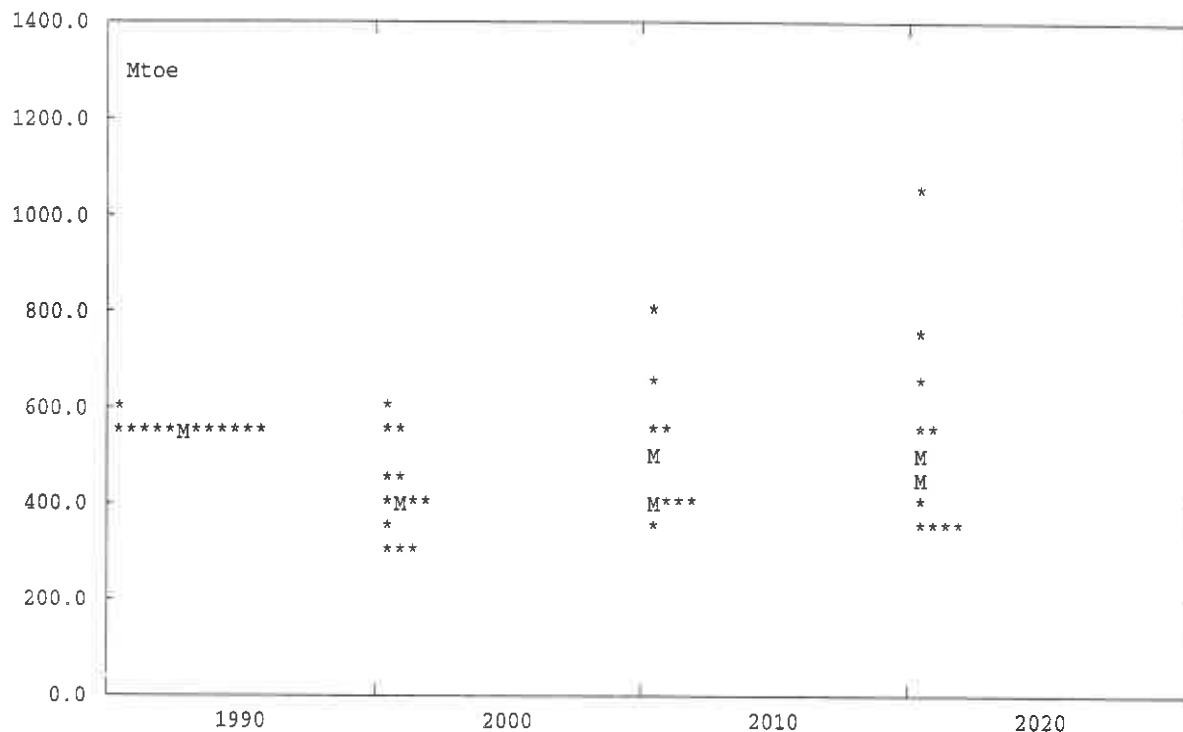


Oil Consumption, Former USSR



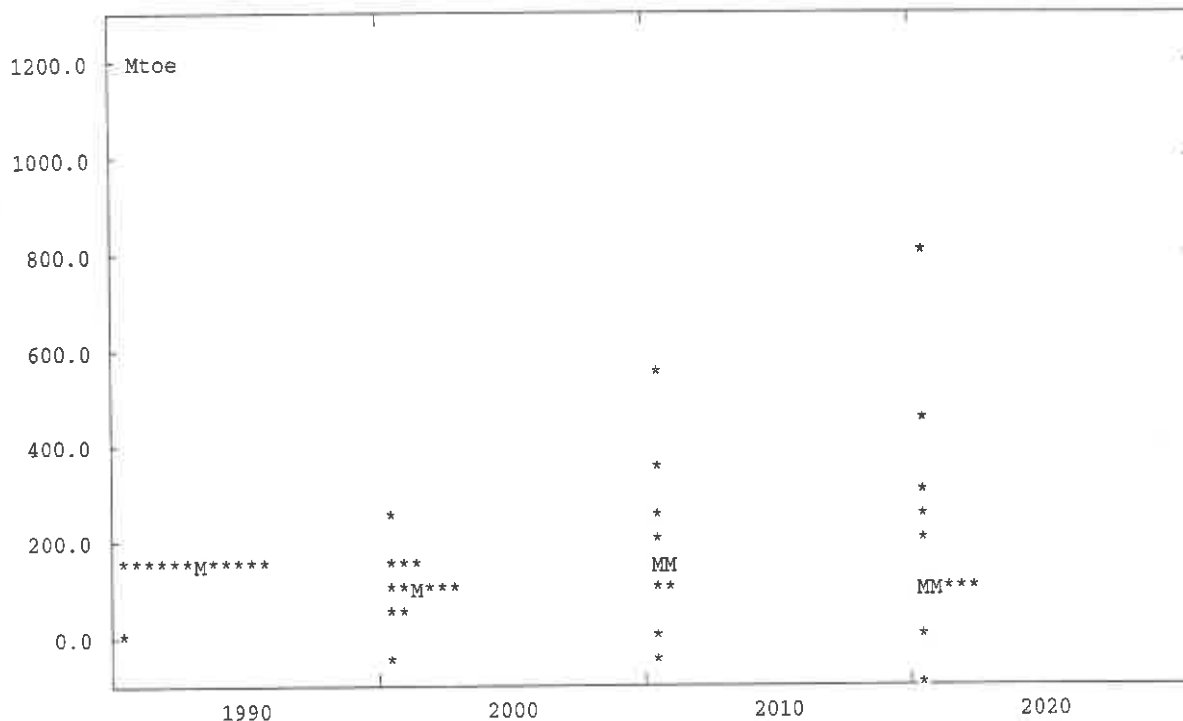
	1990	2000	2010	2020			
Medians:	407.0	290.0	344.0	322.4			
GRREF'93	578.5	GRREF'93	585.2	GRREF'93	553.0	ECSA '95	544.2
PREM '95	425.0	MERGE'95	474.1	AMOCB'93	450.0	GRREF'93	502.6
MERGE'95	423.0	AMOCB'93	350.0	ECSA '95	399.2	WECB1'93	382.0
ITREF'93	418.3	ECSA '95	344.9	IEA '94	391.0	WECB '93	355.0
EIA '95	411.0	ECSC '95	325.9	AMOCL'93	375.0	ISUNF'95	348.0
IEA '94	409.0	AMOCL'93	310.0	EIA '95	367.0	WECA '93	348.0
ECSA '95	408.5	IEA '94	306.0	PREM '95	355.0	LYNCH'94	344.7
ECSC '95	408.5	LYNCH'94	296.9	ECSC '95	333.0	ECSC '95	334.0
ECSB '95	408.5	PREM '95	290.0	LYNCH'94	312.1	ECSB '95	310.7
AMOCB'93	407.0	ITREF'93	287.2	ITREF'93	293.8	ITREF'93	289.3
AMOCL'93	407.0	ECSB '95	280.5	ECSB '95	283.2	MERGE'95	281.7
LYNCH'94	402.6	SIOPT'93	270.0	SIOPT'93	257.0	ISREF'95	261.0
ISUNF'95	401.5	SIREA'93	245.0	MERGE'95	250.3	ISPRE'95	257.0
ISPRE'95	401.5	EIA '95	228.0	SIREA'93	228.0	SIOPT'93	250.0
ISREF'95	401.5	ISUNF'95	222.0			SIREA'93	230.0
SIOPT'93	387.0	ISPRE'95	220.0			WECC '93	230.0
SIREA'93	387.0	ISREF'95	218.0				
WECA '93	378.0						
WECA '93	378.0						
WECB '93	378.0						
WECB1'93	378.0						
WECC '93	378.0						

Oil Production, Former USSR



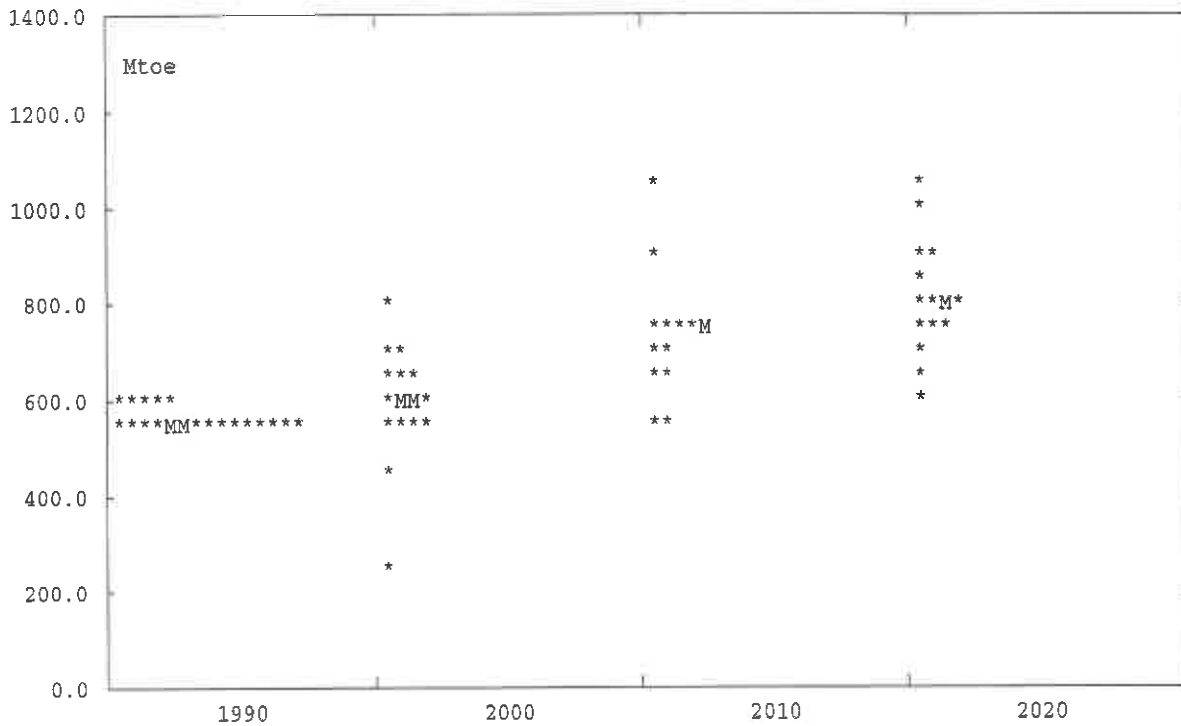
Medians:	1990	2000	2010	2020
GRREF'93	575.5	617.4	796.7	1063.1
ECSC '95	573.5	558.9	659.8	739.2
ECSB '95	573.5	551.8	548.5	668.7
ECSA '95	573.5	450.0	535.0	565.2
PREM '95	571.0	440.0	486.2	564.5
LYNCH'94	570.0	380.0	421.3	522.2
ITREF'93	561.7	375.3	420.9	450.0
MERGE'95	561.7	375.3	420.9	398.0
SIREA'93	560.0	375.3	380.0	363.0
SIOPT'93	560.0	340.0	360.0	359.0
ISPRE'95	531.5	324.0		340.0
ISREF'95	531.5	322.0		330.0
ISUNF'95	531.5	320.0		

Oil Exports - Imports, Former USSR



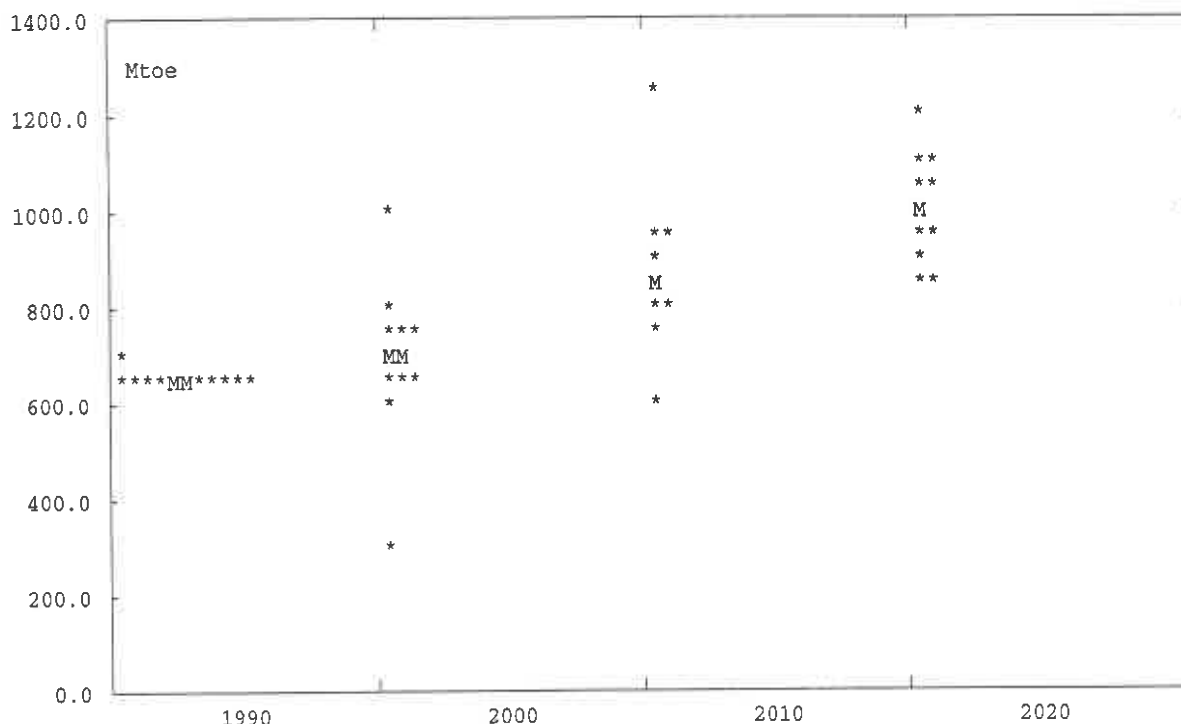
	1990	2000	2010	2020			
Medians:	146.0	102.0	135.1	102.0			
SIREA'93	173.0	ITREF'93	264.6	MERGE'95	546.4	MERGE'95	781.4
SIOPT'93	173.0	LYNCH'94	153.1	ITREF'93	366.1	ITREF'93	449.9
LYNCH'94	167.4	PREM'95	150.0	LYNCH'94	236.4	LYNCH'94	324.0
ECSC'95	160.6	MERGE'95	143.4	PREM'95	180.0	ECSB'95	254.5
ECSB'95	160.6	SIOPT'93	110.0	ECSB'95	138.1	ECSC'95	188.2
ECSA'95	160.6	ISPRE'95	102.0	SIREA'93	132.0	ISUNF'95	102.0
PREM'95	146.0	ISREF'95	102.0	SIOPT'93	123.0	ISREF'95	102.0
ITREF'93	143.4	ISUNF'95	102.0	ECSC'95	87.9	ISPRE'95	102.0
MERGE'95	138.6	SIREA'93	95.0	ECSA'95	21.8	SIREA'93	100.0
ISPRE'95	130.0	ECSB'95	94.8	GRREF'93	-66.8	SIOPT'93	90.0
ISUNF'95	130.0	ECSC'95	49.4			ECSA'95	20.3
ISREF'95	130.0	ECSA'95	30.5			GRREF'93	-104.7
GRREF'93	-3.0	GRREF'93	-26.3				

Natural Gas Consumption, Former USSR



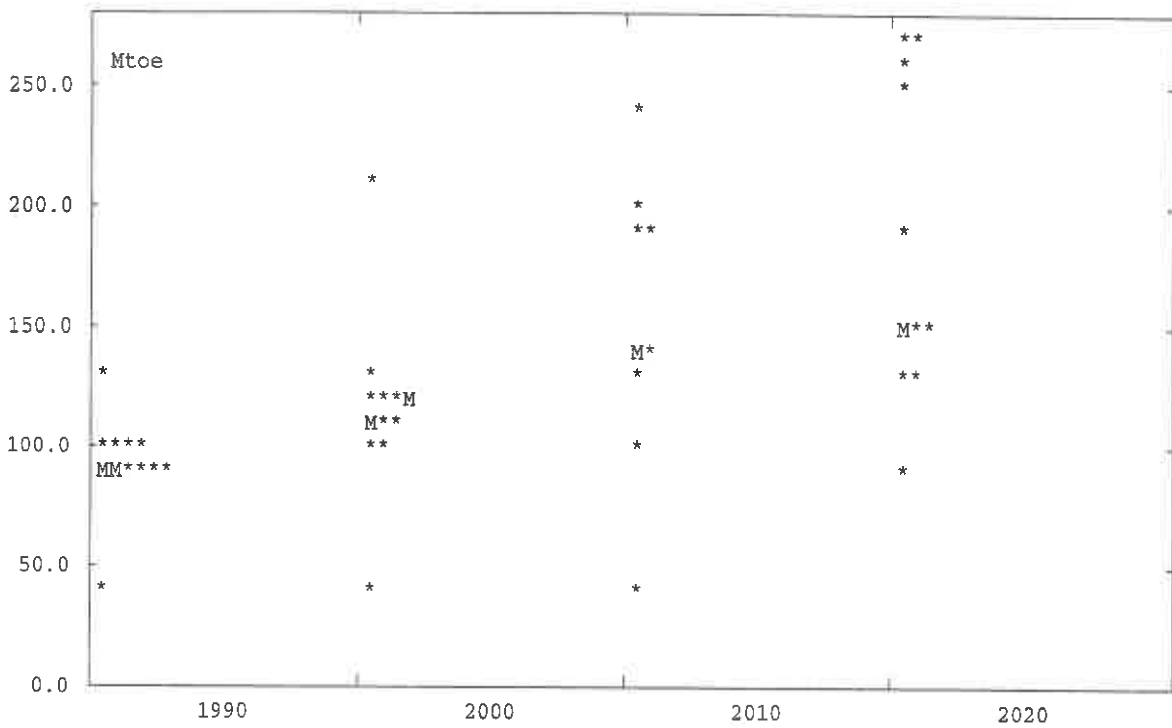
Medians:	1990	2000	2010	2020
MERGE'95	606.3	806.2	1030.6	1060.0
PREM '95	587.0	690.1	875.0	1010.0
ISREF'95	575.5	680.0	751.8	903.9
ISUNF'95	575.5	648.3	750.0	889.3
ISPRE'95	575.5	636.2	748.9	841.0
SIREA'93	573.0	630.0	740.0	821.0
SIOPT'93	573.0	615.0	731.9	817.4
ECSC '95	572.1	606.0	682.0	810.5
ECSA '95	572.1	600.0	676.0	800.0
ECSB '95	572.1	600.0	663.0	766.6
AMOCL'93	572.0	557.0	629.0	760.0
AMOCH'93	572.0	556.0	556.5	744.0
IEA '94	572.0	539.0	546.4	685.0
WECC '93	569.0	538.0		655.0
WECA '93	569.0	466.8		613.0
WECB '93	569.0	271.3		
WECB1'93	569.0			
EIA '95	548.0			
ITREF'93	547.5			
GRREF'93	546.3			

Natural Gas Production, Former USSR



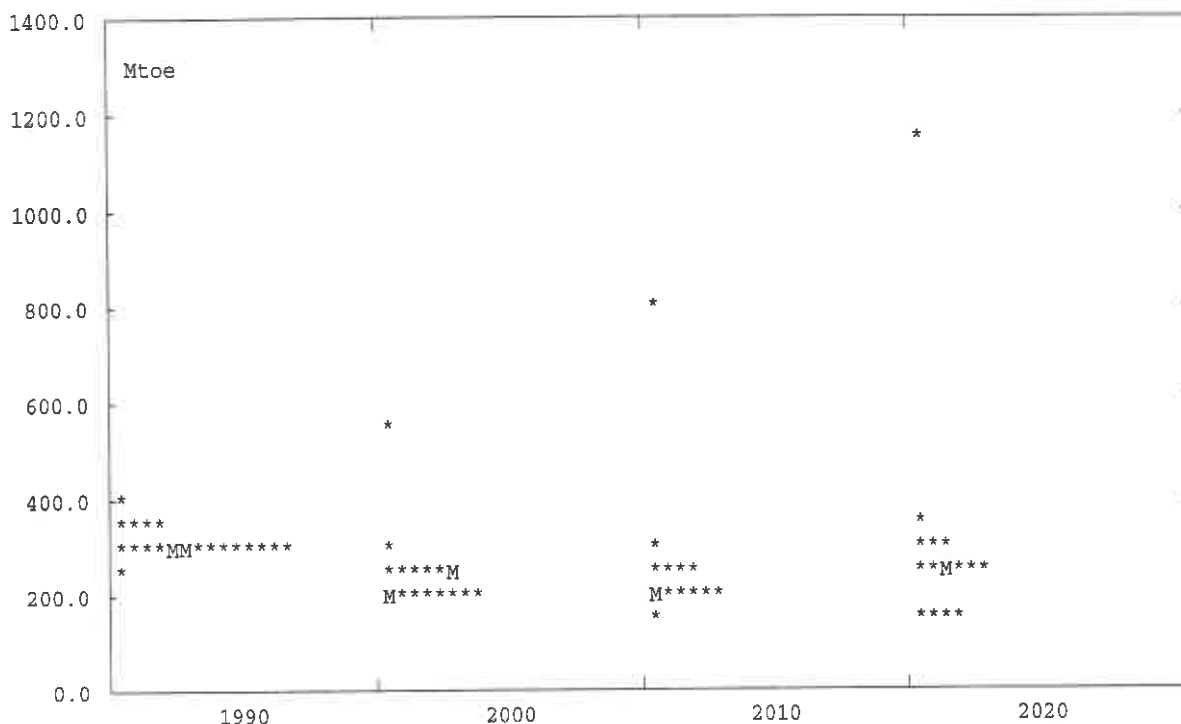
Medians:	1990	2000	2010	2020
PREM '95	677.0	GRREF '93 1017.2	GRREF '93 1273.5	ISUNF '95 1208.0
GRREF '93	674.7	ITREF '93 786.5	ECSA '95 948.6	GRREF '93 1098.7
ISUNF '95	673.5	ECSA '95 773.9	ECSC '95 925.3	ECSA '95 1087.9
ISPREF '95	673.5	ECSC '95 759.9	PREM '95 880.0	MERGE '95 1064.4
ISREF '95	673.5	SIOPT '93 730.0	ITREF '93 845.2	ECSC '95 1037.1
SIREA '93	660.0	SIREA '93 715.0	SIOPT '93 820.0	ISREF '95 989.0
SIOPT '93	660.0	PREM '95 706.0	SIREA '93 800.0	ITREF '93 974.5
ECSB '95	659.9	ISUNF '95 670.0	ECSB '95 743.9	SIOPT '93 930.0
ECSA '95	659.9	ISREF '95 652.0	MERGE '95 581.7	SIREA '93 890.0
ECSC '95	659.9	ISPREF '95 651.0		ECSB '95 871.0
ITREF '93	643.9	ECSB '95 582.0		ISPREF '95 833.0
MERGE '95	641.5	MERGE '95 306.5		

Natural Gas Exports - Imports, Former USSR



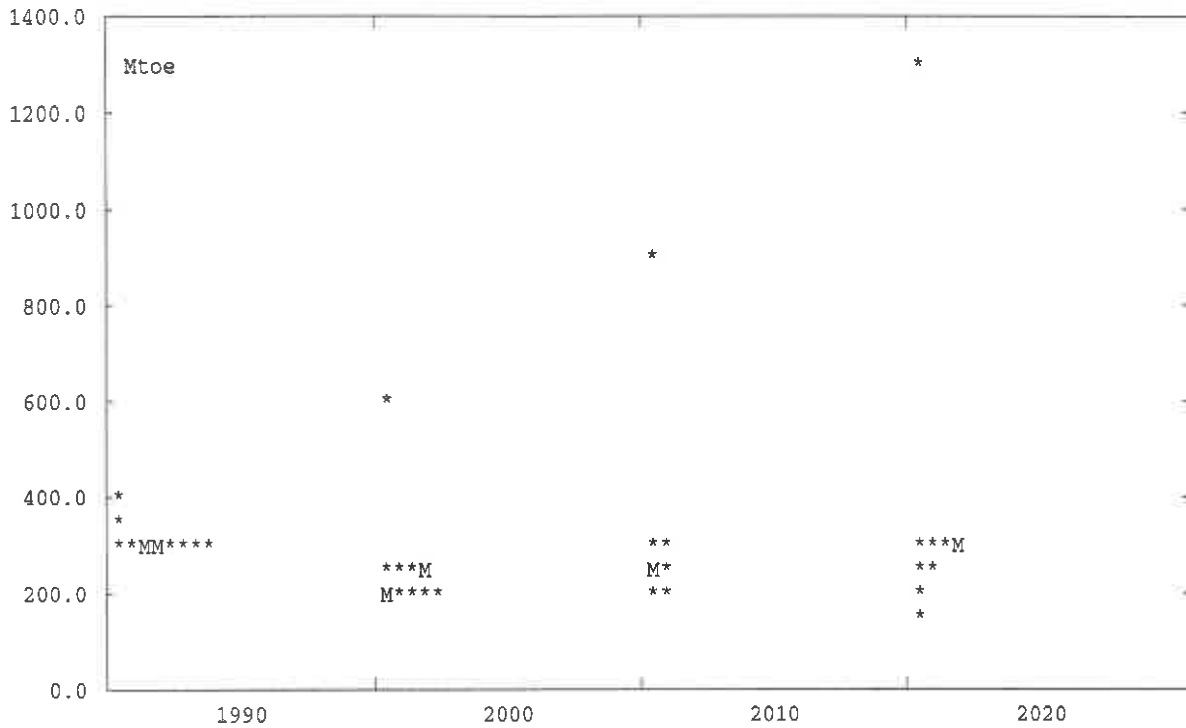
	1990	2000	2010	2020			
Medians:	88.9	114.0	140.0	148.0			
GRREF'93	128.4	GRREF'93	211.0	GRREF'93	242.9	ECSC '95	270.5
ISREF'95	98.0	ECSC '95	125.5	ECSC '95	196.8	ECSC '95	270.5
ISUNF'95	98.0	ECSC '95	123.7	ECSC '95	193.4	ECSC '95	258.0
ISPREF'95	98.0	ECSC '95	115.2	ECSC '95	187.4	MERGE'95	253.8
ITREF'93	96.3	SIREA'93	115.0	PREM '95	140.0	GRREF'93	194.8
PREM '95	90.0	SIOPT'93	115.0	SIOPT'93	138.0	ISUNF'95	148.0
ECSB '95	87.8	ISREF'95	113.0	SIREA'93	134.0	ISPREF'95	148.0
ECSC '95	87.8	ISUNF'95	113.0	ITREF'93	96.3	ISREF'95	148.0
ECSC '95	87.8	ISPREF'95	113.0	MERGE'95	35.2	SIOPT'93	130.0
SIREA'93	87.0	PREM '95	100.0			SIREA'93	130.0
SIOPT'93	87.0	ITREF'93	96.3			ITREF'93	85.1
MERGE'95	35.2	MERGE'95	35.2				

Coal Consumption, Former USSR



Medians:	1990	2000	2010	2020
GRREF'93	380.5	532.3	792.4	1162.6
WECC '93	365.0	278.0	290.0	371.0
WECB '93	365.0	260.0	272.2	304.0
WECB1'93	365.0	247.0	269.0	288.5
WECA '93	365.0	238.0	242.0	275.0
PREM '95	319.0	233.2	227.4	267.0
EIA '95	299.0	225.0	221.0	263.0
IEA '94	289.0	225.0	200.0	240.9
ECSB '95	285.3	223.0	200.0	236.0
ECSC '95	285.3	220.9	195.0	232.1
ECSA '95	285.3	207.0	194.3	228.0
AMOCL'93	285.0	201.0	187.6	168.0
ISUNF'95	279.8	198.0	167.9	159.0
ISPRE'95	279.8	191.0		155.1
ISREF'95	279.8	190.0		126.2
ISREF'95	279.8	178.7		
SIOPT'93	279.0			
SIREA'93	279.0			
MERGE'95	278.0			
ITREF'93	272.4			

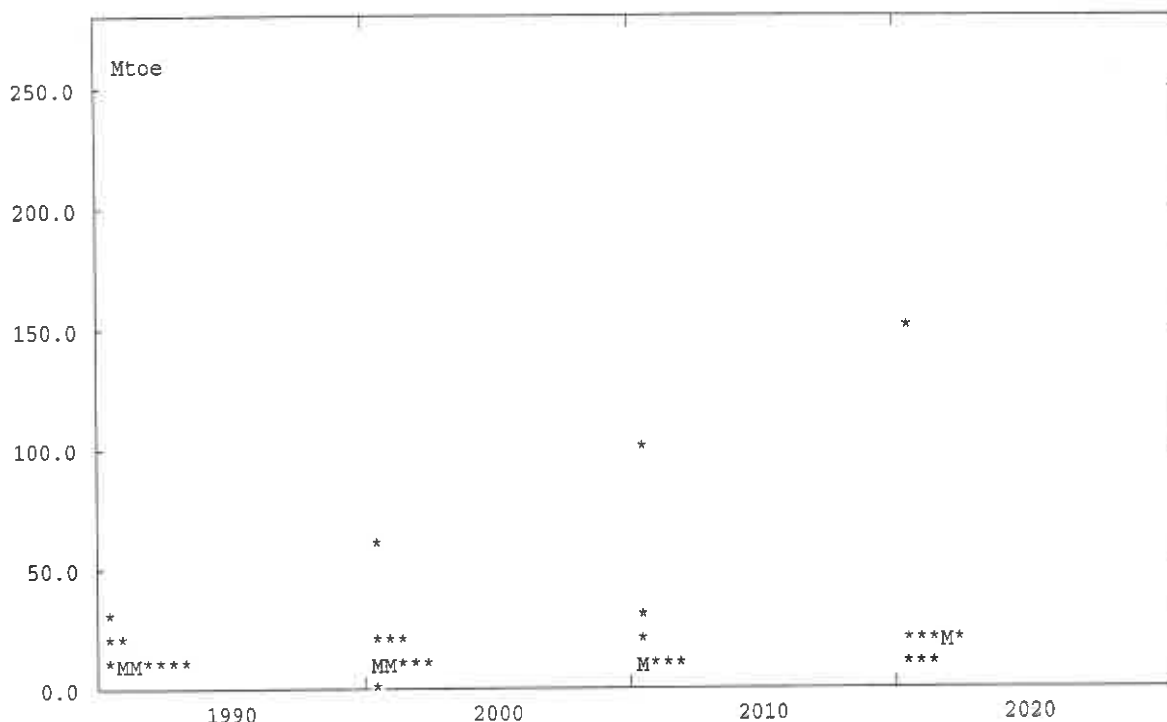
## Coal Production, Former USSR



Medians:	1990	2000	2010	2020
GRREF '93	413.1	589.2	890.8	1312.7
PREM '95	332.0	260.0	320.0	319.0
SIOPT '93	297.0	259.0	279.0	294.9
SIREA '93	297.0	248.0	252.0	290.0
ECSB '95	297.0	230.9	238.1	278.0
ECSC '95	297.0	217.0	203.4	259.2
ECSA '95	297.0	213.0	180.1	243.0
ISPRE '95	293.3	206.0		183.0
ISREF '95	293.3	205.0		141.0
ISUNF '95	293.3	192.3		

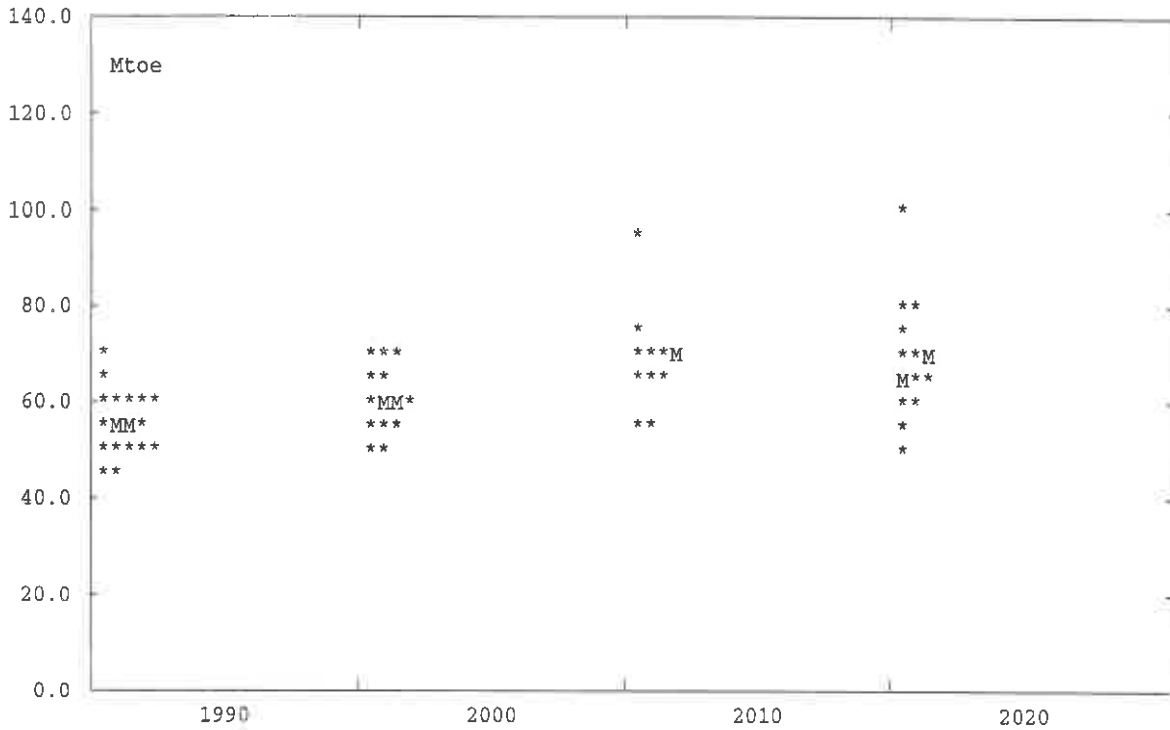


Coal Exports - Imports, Former USSR



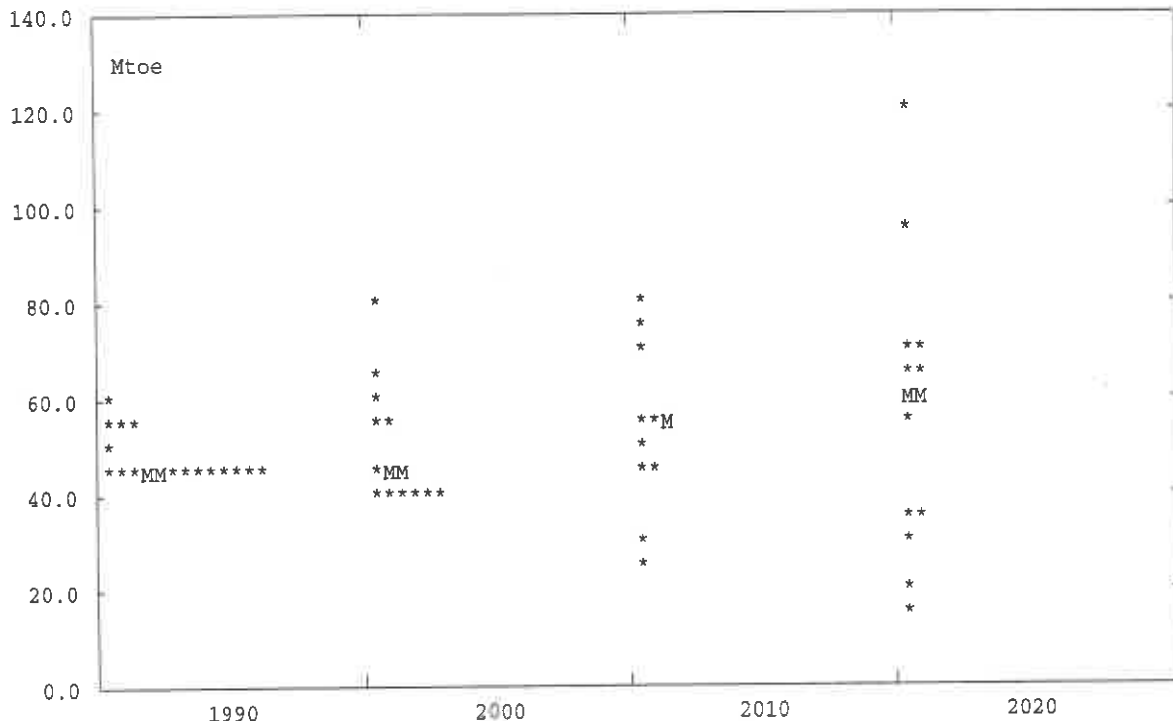
Medians:	1990	2000	2010	2020
GRREF'93	32.7	56.9	98.4	150.1
SIOPT'93	18.0	15.0	30.0	18.3
SIREA'93	18.0	15.0	15.8	15.0
ISREF'95	13.5	15.0	12.2	15.0
ISPHE'95	13.5	13.6	10.7	15.0
ISUNF'95	13.5	12.0	10.0	15.0
PREM '95	13.0	10.0	10.0	14.9
ECSCA '95	11.7	10.0		11.0
ECSC '95	11.7	10.0		6.4
ECSCB '95	11.7	0.0		

Renewables, Electric, Former USSR



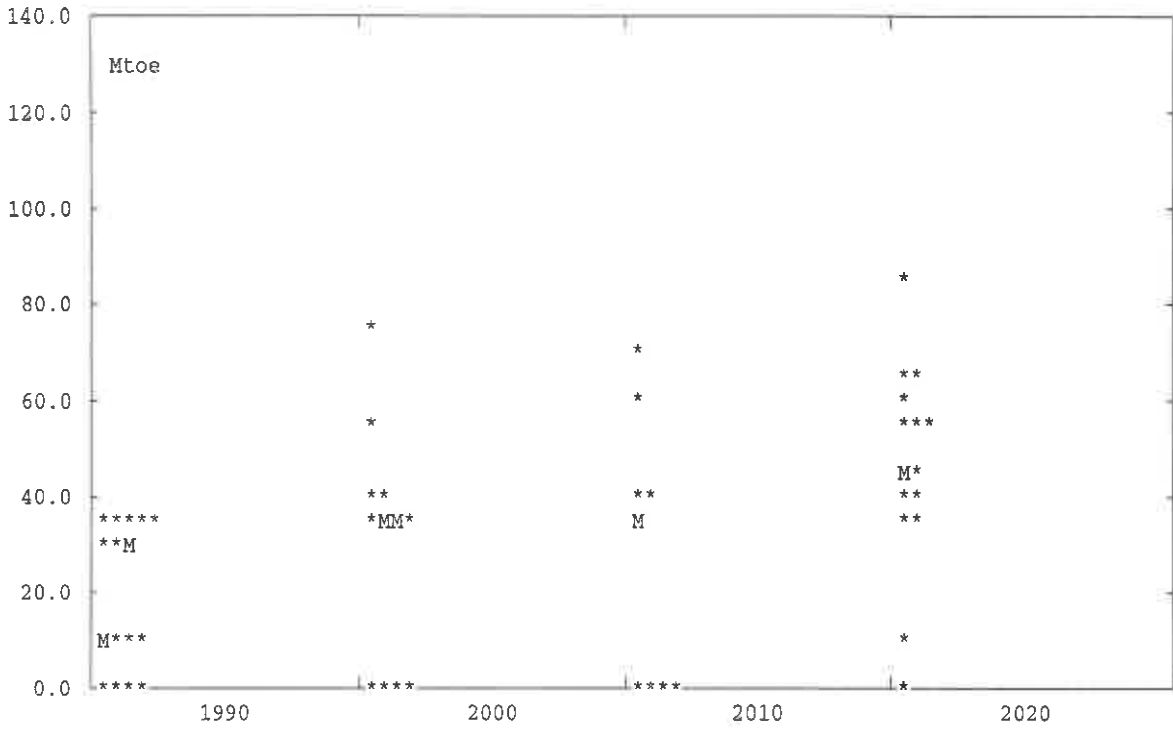
Median#:	1990	2000	2010	2020			
ITREF '93	70.8	ITREF '93	70.8	AMOCB '93	96.0	ECSC '95	100.6
MERGE '95	67.1	AMOCB '93	68.0	IEA '94	75.0	ISUNF '95	78.0
ECSC '95	62.1	AMOCB '93	68.0	ITREF '93	70.8	ECSC '95	77.7
ECSC '95	62.1	MERGE '95	67.1	ECSC '95	70.5	ECSC '95	73.0
AMOCB '93	61.0	IEA '94	64.0	AMOCB '93	68.0	ITREF '93	70.8
AMOCB '93	61.0	EIA '95	61.0	EIA '95	68.0	WECB1 '93	70.0
ISUNF '95	56.0	ECSC '95	60.4	MERGE '95	67.1	ISREF '95	69.0
EIA '95	56.0	ECSC '95	59.7	ECSC '95	62.7	MERGE '95	67.1
ISREF '95	56.0	ISPRE '95	59.7	ECSC '95	62.7	ISPRE '95	67.0
ISPRE '95	56.0	ISUNF '95	55.0	SIOPT '93	54.0	WECA '93	65.0
IEA '94	52.0	ISREF '95	55.0	SIREA '93	53.0	WECB '93	58.0
WECC '93	50.0	SIREA '93	49.0			SIOPT '93	58.0
WECB '93	50.0	SIOPT '93	49.0			SIREA '93	56.0
WECA '93	50.0					WECC '93	52.0
WECB1 '93	50.0						
SIREA '93	46.0						
SIOPT '93	46.0						

Nuclear Energy, Former USSR



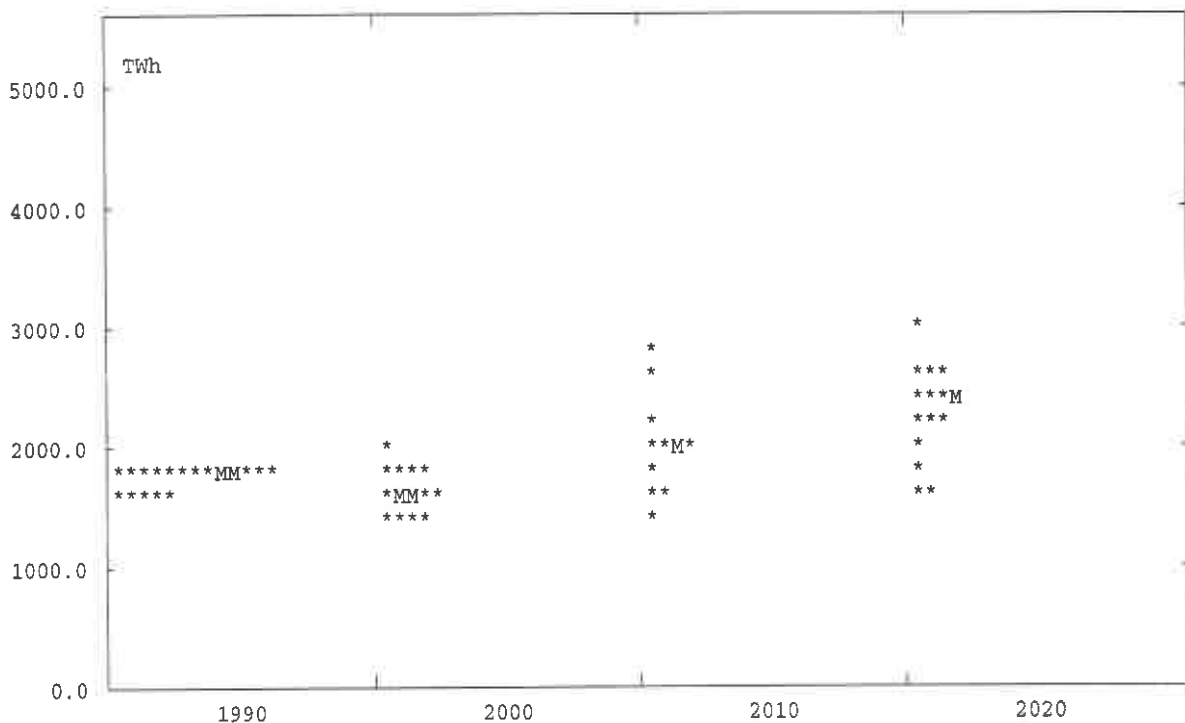
Medians:	1990	2000	2010	2020			
MERGE'95	61.8	AMOCCH'93	80.0	AMOCCH'93	80.0	WECB1'93	122.0
ITREF'93	56.4	AMOCL'93	65.0	AMOCL'93	75.0	WECA '93	93.0
AMOCL'93	55.0	MERGE'95	61.8	IEA '94	71.0	ECSC '95	69.8
AMOCCH'93	55.0	IEA '94	55.0	ECSC '95	57.3	WECB '93	69.0
EIA '95	52.0	EIA '95	54.0	EIA '95	54.0	WECC '93	65.0
ECSB '95	47.3	ECSC '95	47.0	SIOPT'93	54.0	ECSB '95	63.3
ECSC '95	47.3	ECSC '95	42.6	ECSB '95	51.9	SIOPT'93	60.0
ISUNF'95	47.2	ITREF'93	42.6	SIREA'93	47.0	ISUNF'95	59.0
ISREF'95	47.2	SIREA'93	41.0	ITREF'93	46.2	SIREA'93	53.0
ISPRE'95	47.2	SIOPT'93	41.0	ECSC '95	28.2	ISPRE'95	34.0
IEA '94	47.0	ISPRE'95	41.0		27.2	ECSC '95	33.2
WECC '93	47.0	ISREF'95	41.0			MERGE'95	31.0
WECB '93	47.0	ISUNF'95	41.0			ISREF'95	20.0
WECA '93	47.0					ITREF'93	14.1
WECB1'93	47.0						
SIREA'93	44.0						
SIOPT'93	44.0						

Renewables, Nonelectric, Former USSR



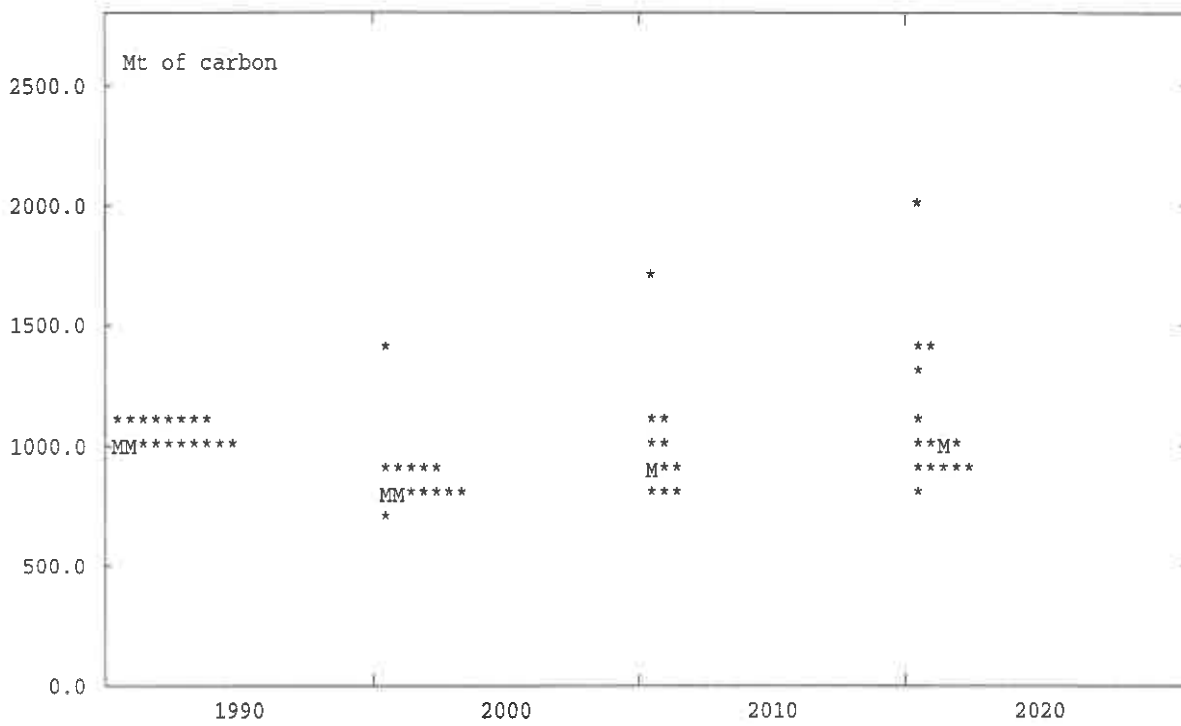
Medians:	1990	2000	2010	2020
SIREA'93	36.0	73.0	70.0	85.0
SIOPT'93	36.0	56.0	60.0	65.0
ISPREF'95	35.0	41.0	39.9	65.0
ISREF'95	35.0	39.7	38.6	58.0
ISUNF'95	35.0	35.0	37.2	54.0
ECSB '95	29.8	35.0	0.0	53.0
ECSCA '95	29.8	34.0	0.0	53.0
ECSC '95	29.8	33.5	0.0	46.7
WECB '93	11.0	0.0	0.0	46.0
WECA '93	11.0	0.0	0.0	39.2
WECB1'93	11.0	0.0	0.0	38.0
WECC '93	11.0	0.0	0.0	36.0
ITREF'93	0.0	0.0	0.0	35.2
GRREF'93	0.0	0.0	0.0	9.3
IEA '94	0.0	0.0	0.0	0.0
MERGE'95	0.0	0.0	0.0	0.0

Electricity Generation, Former USSR



Medians:	1990	2000	1990.0	2010	2020
MERGE '95	1786.0	1999.0	AMOCB '93	2746.0	3025.0
AMOCB '93	1727.0	1882.0	AMOCB '93	2501.0	2653.3
AMOCB '93	1727.0	1870.2	ITREF '93	2121.6	2591.0
ISPRE '95	1727.0	1702.4	IEA '94	2047.0	2551.4
IEA '94	1727.0	1700.0	GRREF '93	2037.7	2478.0
ISUNF '95	1727.0	1690.0	SIOPT '93	1990.0	2455.9
ISREF '95	1727.0	1659.6	SIREA '93	1900.0	2450.0
WECA '93	1718.4	1650.0	ECSC '95	1849.4	2417.0
WECB '93	1718.4	1584.1	MERGE '95	1664.5	2258.6
WECB1 '93	1718.4	1523.5	ECSC '95	1611.7	2250.0
WECC '93	1718.4	1393.0	ECSC '95	1432.7	2107.0
SIREA '93	1700.0	1388.0	ISPRE '95		1914.0
SIOPT '93	1700.0	1385.0	ISREF '95		1859.0
ITREF '93	1632.0	1315.3	ECSC '95		1664.6
GRREF '93	1631.1		ECSC '95		1623.9
ECSC '95	1609.0				
ECSC '95	1609.0				
ECSCB '95	1609.0				

Carbon Emissions, Former USSR



Medians:	1990	2000	2010	2020
ECSCB '95	1089.9	1367.5	1738.8	2021.5
ECSCA '95	1089.9	940.7	1110.0	1372.3
ECSC '95	1089.9	935.0	1061.1	1350.0
WECC '93	1079.1	905.5	968.0	1263.4
WECA '93	1079.1	873.0	968.0	1104.9
WECSB '93	1079.1	855.0	929.1	1031.9
WECSB1 '93	1079.1	845.8	910.0	975.0
GRREF '93	1059.5	834.6	850.0	967.0
EIA '95	1018.0	815.0	834.7	950.8
ISUNF '95	1013.0	810.0	811.0	941.0
ISPRE '95	1013.0	793.0	801.2	930.0
ISREF '95	1013.0	771.0		920.0
AMOCL '93	974.0	768.0		889.5
AMOCH '93	974.0	729.3		872.8
SIOPT '93	965.0			787.4
SIREA '93	965.0			
MERGE '95	960.0			
ITREF '93	959.0			