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DE LA TRANSITION
ÉNERGÉTIQUE

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STRATÉGIE FRANÇAISE
SUR L'ÉNERGIE
ET LE CLIMAT

FRENCH EXPERIENCE IN BUILDING AP AND GHG EMISSION PROJECTIONS

TFEIP – PROJECTIONS PANEL – 15/05/2024

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Summary

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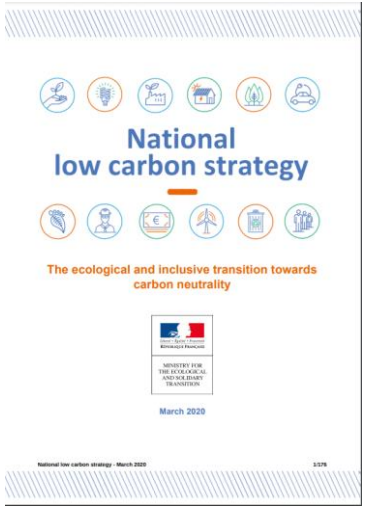
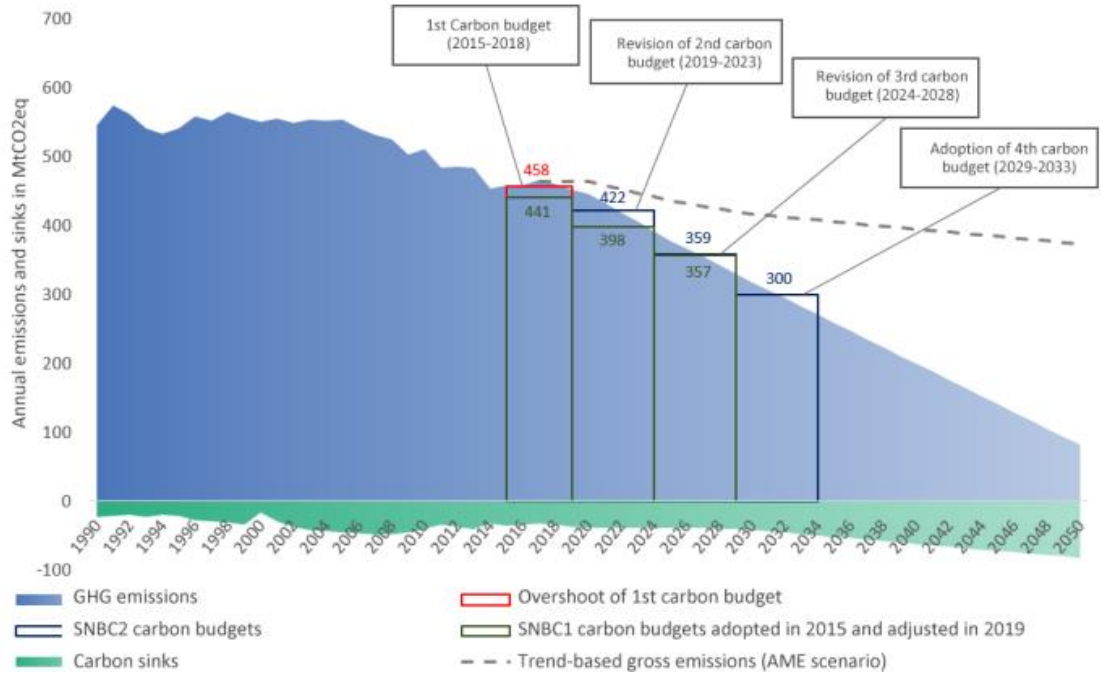
1. THE FRENCH AP AND GHG SCENARIO

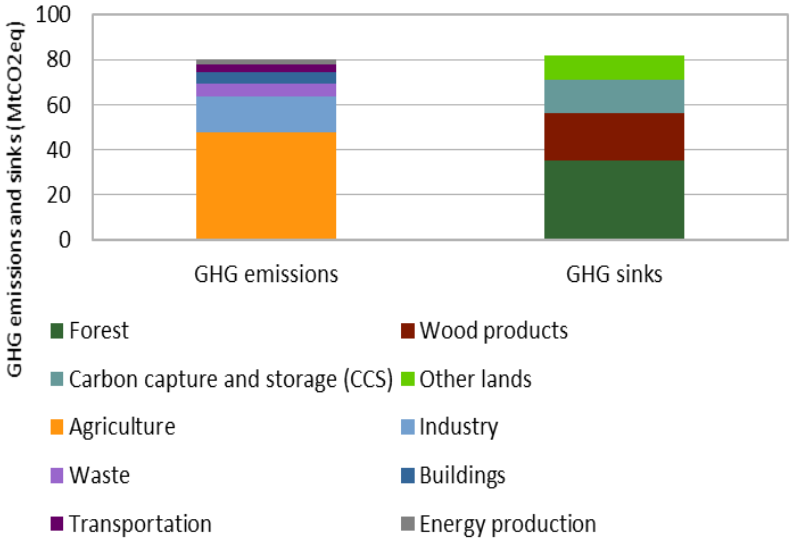
The National Low Carbon Strategy

- **A 1st National Low Carbon Strategy in 2015 to divide by 4 our national emissions by 2050**
- **Updated in 2020 with enhanced ambition : aiming for climate neutrality by 2050**
- **The roadmap for France's climate change mitigation policy**
  - Carbon budgets for 3 consecutive 5-year period
  - Definition of policy orientations to achieve the goals
  - Revision every 5-year (or sooner if needed)
  - Articulated with other plans (including France's energy strategy, as well as local policy planning documents)
  - Consistent with EU and international commitments

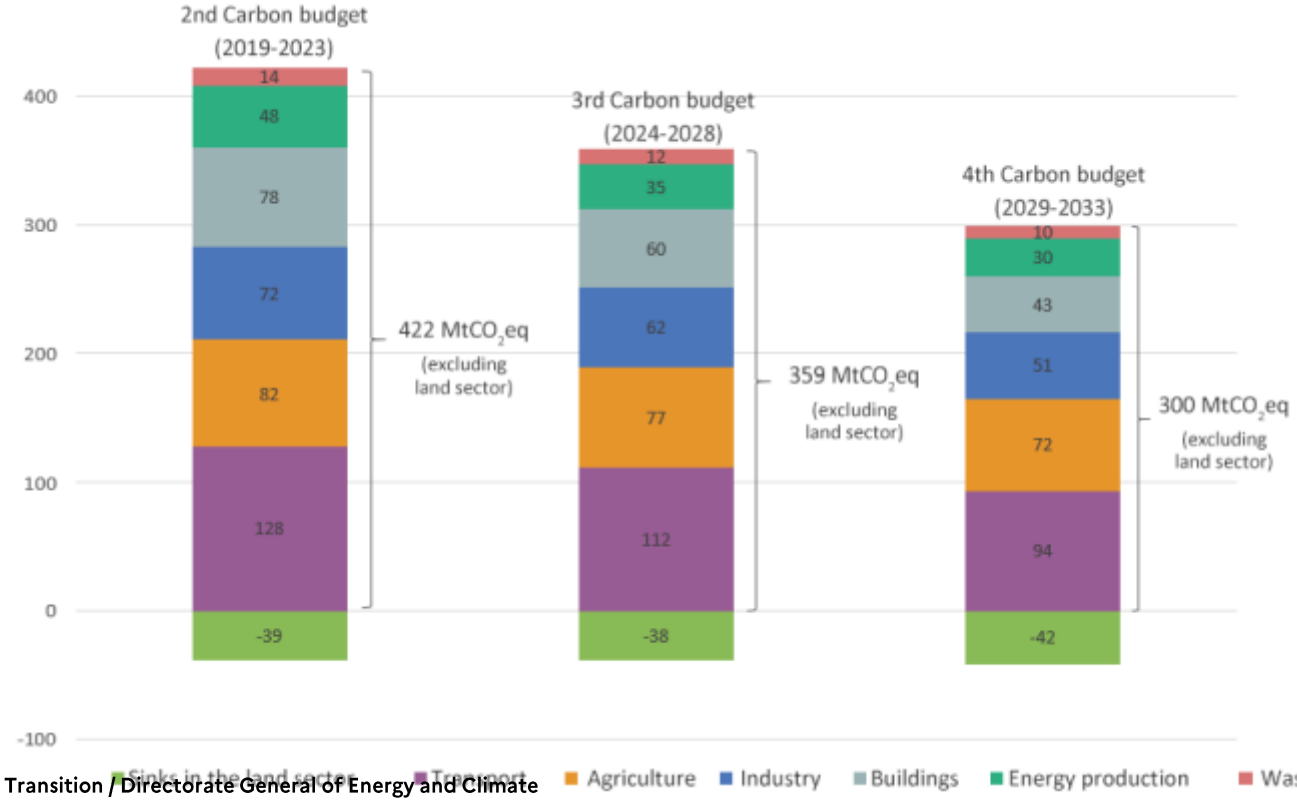


A quantified, detailed roadmap for 2030 and 2050

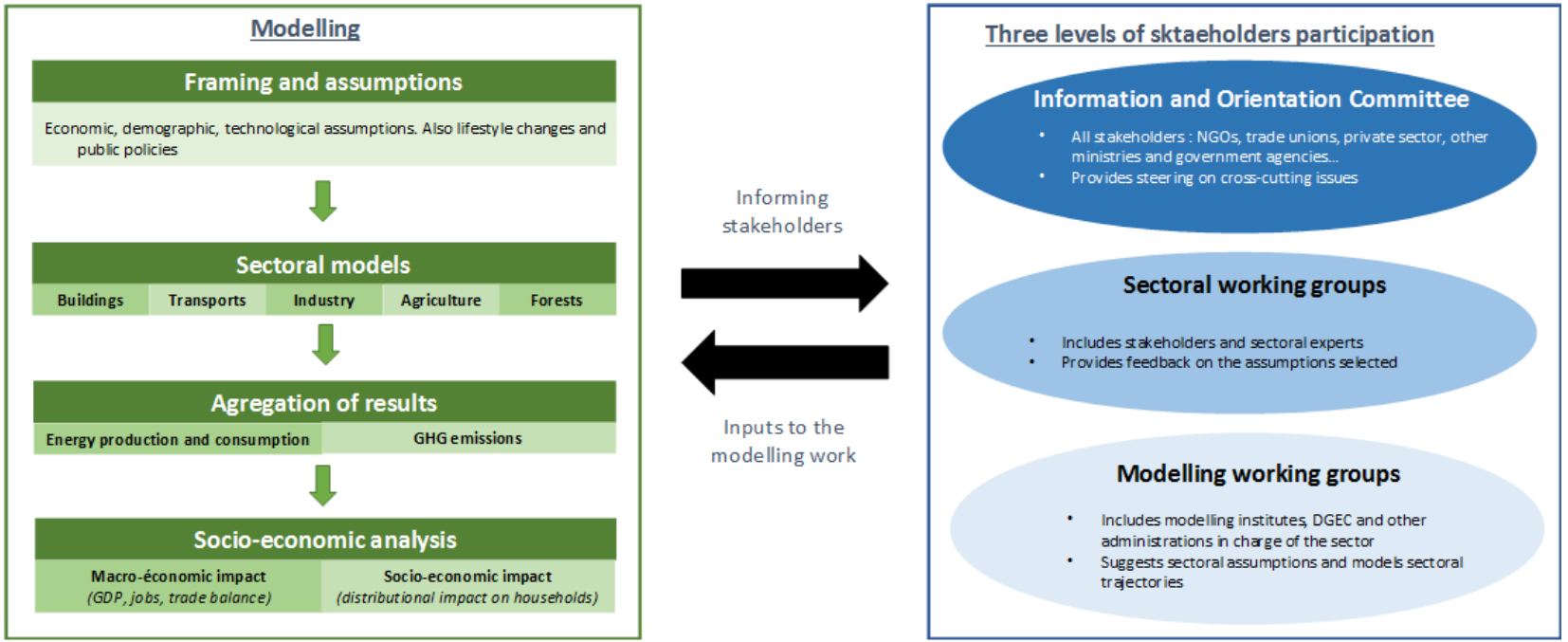




… with sectoral sub-budgets



Elaboration of the AP and GHG scenario



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WG agriculture

WG transports

WG building

WG industry-energy-waste

WG LULUCF

Sectoral models

MoSUT – agriculture
Calculateur forêt bois – forestry
Artificialisation
MENFIS – housing
Modèle tertiaire - building
MICO – Air conditionning
Modev – traffic
Modèles de parc – vehicules
Modèle aviation – aviation
Pepit0 – industry production
EnerMed – industry and energy
Déchets – waste
F-gaz – F-gaz

Supply-demand balance of biomass

Overseas territories modelisation

Energy agregation
Enerdata

Production of energy balances

GHG and AP agregation
CITEPA

Different format for national inventories and international reporting (UNFCCC, European Commission, UNECE)

Complementary use of Titan (technical-economic model)

Carbon footprint forecast

Macro economic evaluation

Investments need

Supply-demand balance of material

Socio-economic evaluation

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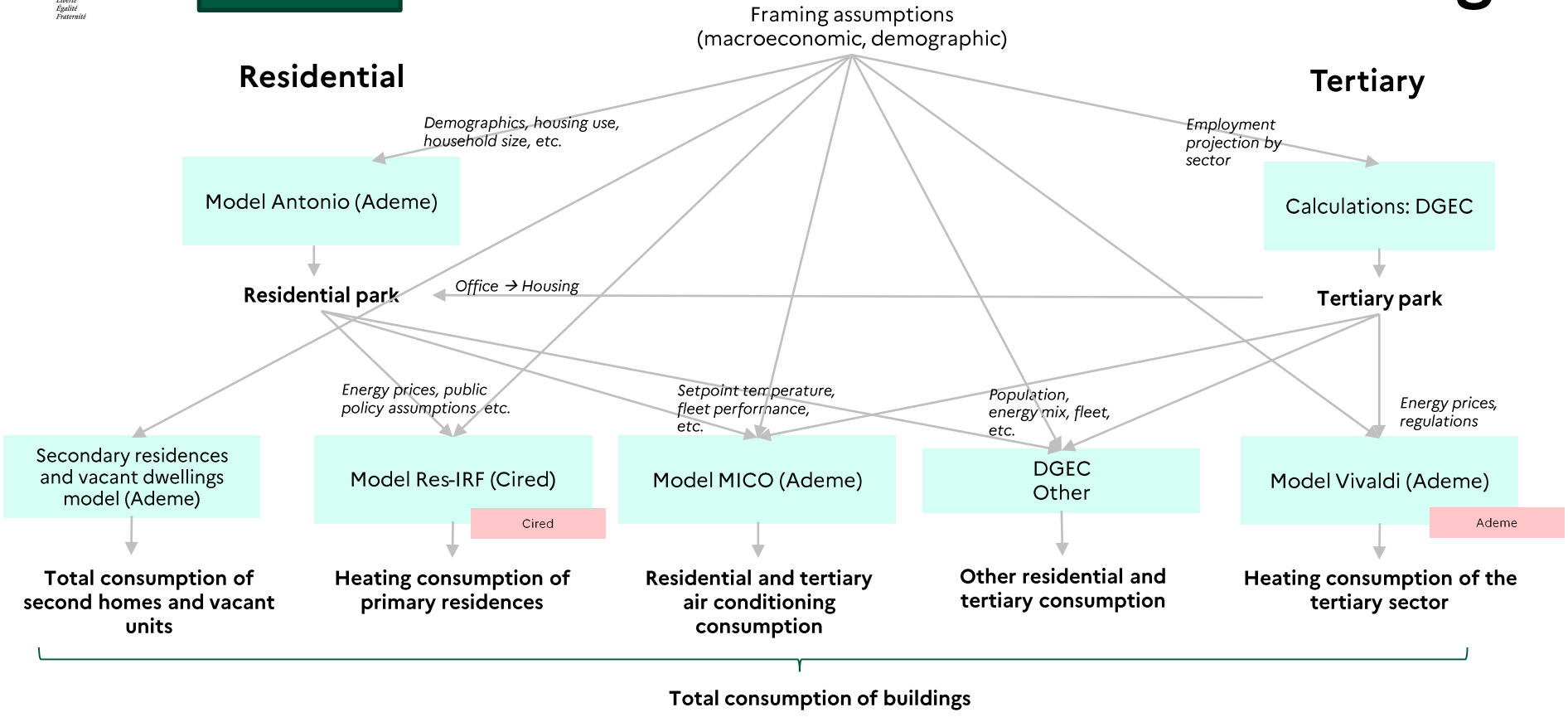
Buildings



All models are operated internally by DGEC

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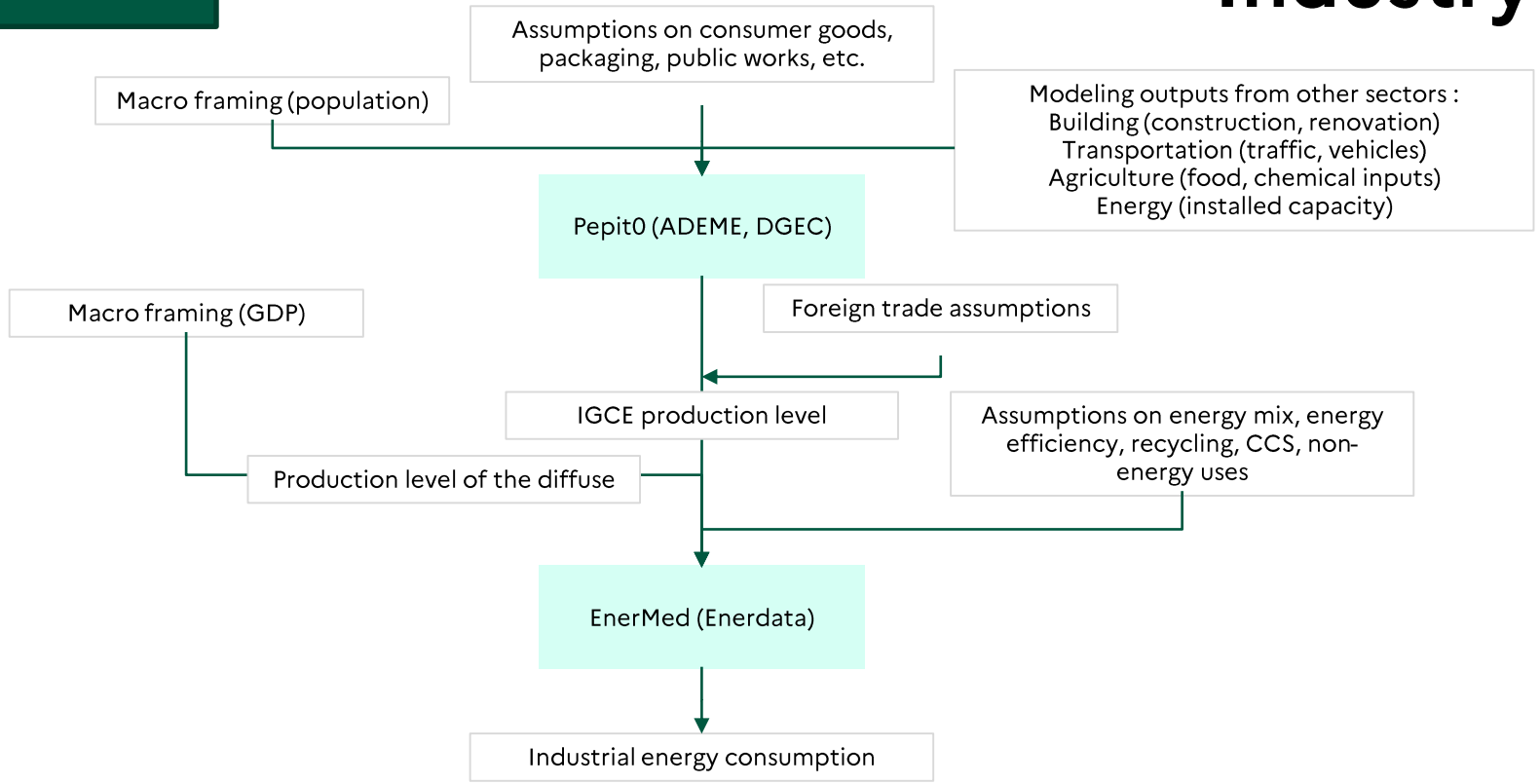
Industry



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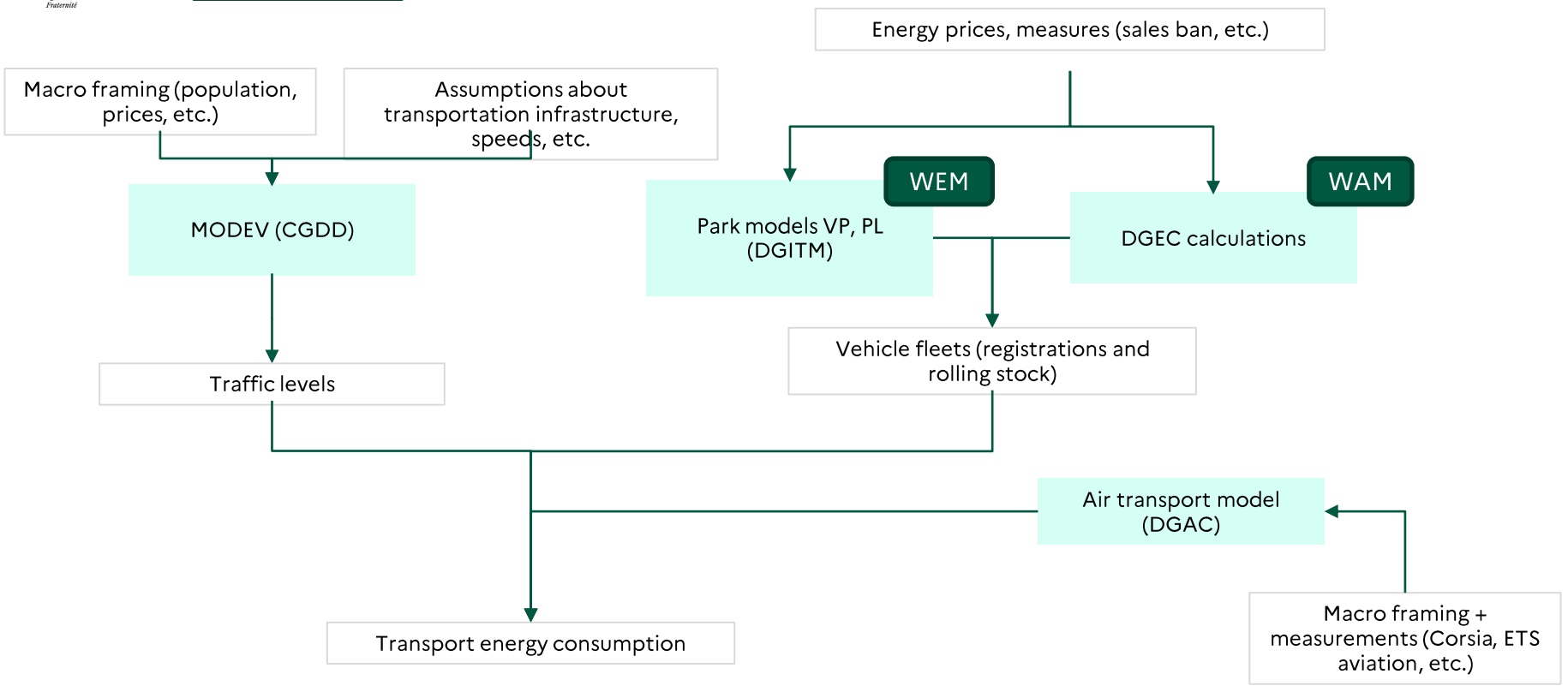
Transports



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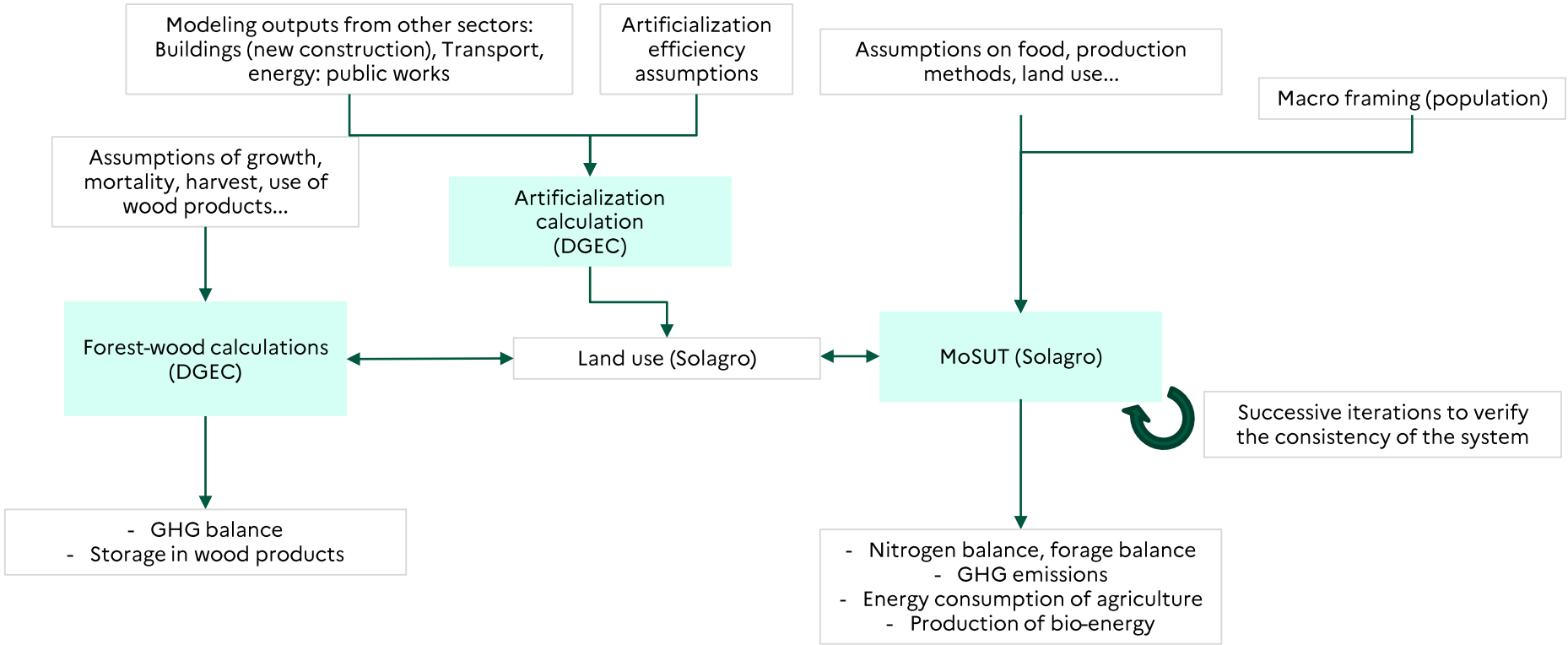
Agriculture – Forest - Lands



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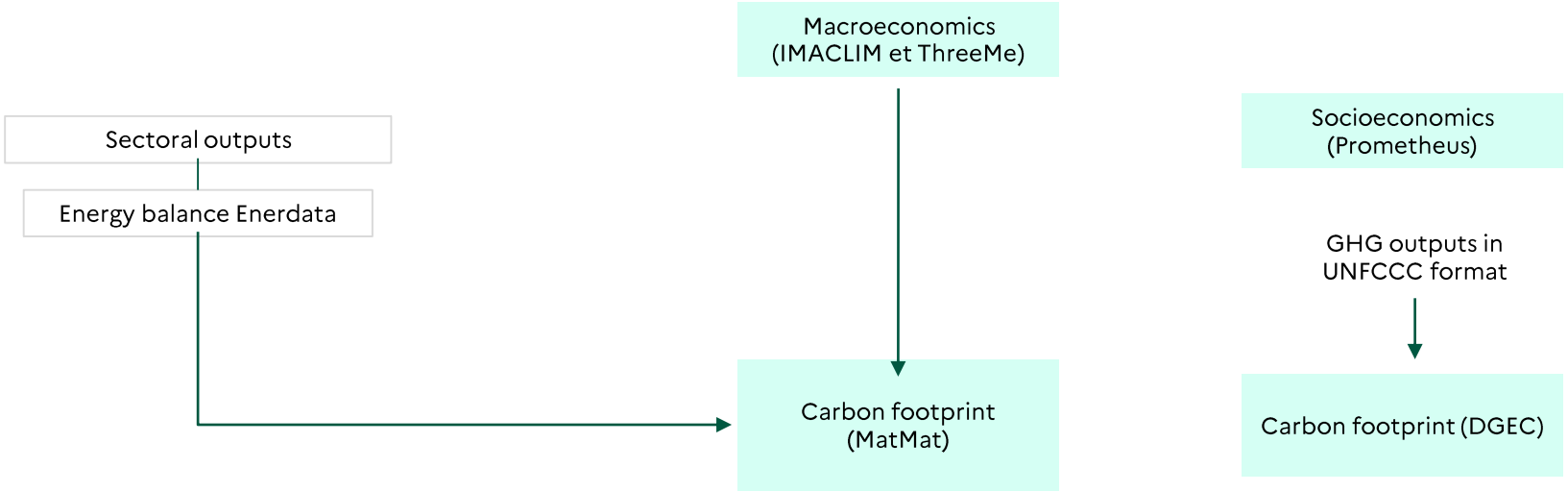
Macroeconomics



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From energy balances…

TWh	Coal	Crude oil	Refined petroleum products	Synthetic fuels	Natural gas	Synthetic gas	Nuclear	Electric renewables	Thermal renewable and waste						Electricity	Heat	Hydrogen	Total
									Solid biomass	Waste	Biofuels	Renewable gas	Environmental heat	Solar thermal and geothermal energy				
Primary energy production	0	0	0	0	0	0	719,4	562,2	262,5	19,2	1,6	0,2	167,2	24,4	0	0	0	**1756,6**
Imports	6,5	114,0	2,0	0	2,7	0	0	0	5,2	0	5,4	0	0	0	0	0	0	**135,7**
Exportations	0	0	-33,8	-8,5	0	0	0	0	0	0	0	0	0	0	-21,8	0	0	**-64,2**
International maritime routes	0	0	-1,7	-4,3	0	-0,3	0	0	0	0	-0,2	-6,1	0	0	0	0	0	**-12,6**
International air routes	0	0	-18,7	-28,3	0	0	0	0	0	0	-14,0	0	0	0	0	0	-2,6	**-63,6**
Inventory changes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Primary consumption	**6,5**	**114,0**	**-52,2**	**-41,1**	**2,7**	**-0,3**	**719,4**	**562,2**	**267,7**	**19,2**	**-7,3**	**-5,9**	**167,2**	**24,4**	**-21,8**	**0**	**-2,6**	**1752,0**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Statistical gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Power generation	0	0	0	0	0	0	719,4	562,2	14,5	2,8	6,6	0,1	0	6,8	-817,4	0	26,2	**521,0**
Heat generation	0	0	0	0	0	0	0	0	33,7	14,4	0	8,2	0	11,3	0	-64,6	0	**3,0**
Renewable gas production	0	0	0	0	0	0	0	0	105,3	0	0	-101,2	0	0	0	0	0	**4,2**
Synthesis gas production	0	0	0	0	0	-4,6	0	0	0	0	0	0	0	0	0	0	6,4	**1,8**
Oil refining	0	118,1	-116,9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1,2**
Biofuel production	0	0	0	0	0	0	0	0	61,2	0	-61,2	0	0	0	0	0	0	**0**
Production of e-fuels	0	0	0	-56,7	0	0	0	0	0	0	0	0	0	0	0	0	79,0	**22,3**
Hydrogen production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227,4	0	-163,8	**63,7**
Other transformations, transfers	3,3	-4,1	5,4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4,6**
Internal uses of the energy branch	1,3	0	16,4	0	0	0,2	0	0	0	0	0	4,5	0	0	23,9	0	0	**46,4**
Transmission and distribution los	0	0	0	0	0	0,1	0	0	0	0	0	1,1	0	0	60,9	5,0	0	**67,1**
Net consumption of the energy branc	**4,6**	**114,0**	**-95,1**	**-56,7**	**0**	**-4,3**	**719,4**	**562,2**	**214,8**	**17,2**	**-54,7**	**-87,2**	**0**	**18,1**	**-505,2**	**-59,6**	**-52,2**	**735,1**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Industry	1,8	0	0,7	0	0	1,7	0	0	18,5	2,0	1,4	32,8	11,3	0,0	142,8	18,4	8,2	**239,7**
Transport	0	0	2,0	2,9	0	0,3	0	0	0	0	11,3	4,9	0	0	110,4	0	5,4	**137,3**
Residential	0	0	0,2	0	0	1,3	0	0	28,9	0	0	24,9	125,0	3,1	129,1	22,2	0	**334,7**
Tertiary	0	0	0,1	0	0	0,7	0	0	0,3	0,0	0	12,4	29,5	1,0	81,6	18,9	0	**144,5**
Farming	0	0	0	0,5	0	0,1	0	0	4,6	0	16,6	1,5	1,5	2,2	7,8	0	0,4	**35,3**
Technological wells	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,7	0	0	**11,7**
Final energy consumption	**1,8**	**0**	**3,0**	**3,4**	**0**	**4,0**	**0**	**0**	**52,4**	**2,0**	**29,3**	**76,5**	**167,2**	**6,3**	**483,4**	**59,6**	**14,1**	**903,2**
Final non-energy consumption	0	0	39,8	12,2	2,7	0	0	0	0,6	0	18,1	4,8	0	0	0	0	35,5	**113,7**
Final consumption	**1,8**	**0**	**42,9**	**15,6**	**2,7**	**4,0**	**0**	**0**	**53,0**	**2,0**	**47,4**	**81,3**	**167,2**	**6,3**	**483,4**	**59,6**	**49,6**	**1016,8**

…To greenhouse gases projections

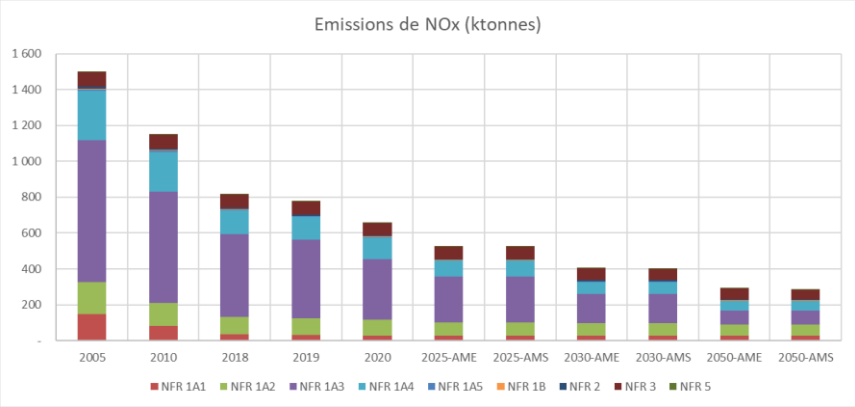
Total (Net Emissions)[1]	CRF	2020	2030	2040	2050
1. Energy	**1**	**264 729,61**	**224 896,03**	**182 869,84**	**166 450,99**
A. Fuel Combustion (Sectoral Approach)	1A	261 524,28	222 268,43	184 712,75	171 312,24
1. Energy Industries	**1A1**	**37 115,28**	**28 088,38**	**27 406,31**	**33 077,45**
a. Public electricity and heat production	1A1a	29 889,82	20 102,80	19 851,99	25 946,62
i. Electricity production	EL	17 486,87	8 985,63	8 852,10	9 987,28
ii. Urban heating	CU	5 454,18	4 062,89	3 943,97	3 901,92
iii. Waste incineration	DE	6 948,78	12 054,29	12 055,92	12 057,42
b. Petroleum refining	1A1b	5 122,43	5 639,99	5 214,52	4 799,59
c. Manufacture of solid fuels and other energy industries	1A1c	2 103,03	2 345,59	2 339,80	2 331,24
2. Manufacturing Industries and Construction	**1A2**	**42 186,67**	**35 474,30**	**32 423,33**	**29 893,00**
3. Transport	**1A3**	**109 469,28**	**102 014,49**	**78 966,99**	**70 871,09**
a. Domestic aviation	1A3a	3 076,53	4 709,74	5 020,45	5 172,15
b. Road transportation	1A3b	104 468,24	95 481,22	72 169,48	63 936,09
c. Railways	1A3c	309,49	304,75	304,75	304,75
d. Domestic navigation	1A3d	1 302,91	1 207,81	1 171,34	1 145,75
e. other transportation	1A3e	312,12	310,96	300,97	312,35
4. Other Sectors	**1A4**	**71 266,53**	**56 344,65**	**45 771,68**	**37 921,81**
a. Commercial/Institutionnal	1A4a	19 912,39	15 828,30	14 266,23	13 300,69
b. Residential	1A4b	39 971,15	30 318,46	22 449,50	16 267,47
c. Agriculture/forestry/fishing	1A4c	11 382,99	10 197,90	9 055,95	8 353,64
5. Other	**1A5**	1 486,53	346,62	144,43	48,89
B. Fugitive Emissions from Fuels	1B	3 205,33	2 627,60	- 1 842,90	- 4 861,25
1. Solid Fuels	1B1	25,56	10,05	10,05	10,05
2. Oil and Natural Gas and other emissions from energy pro	1B2	3 179,77	4 202,55	3 257,05	3 078,70
C. CO_2 transport and storage	1C	-	- 1 585,00	- 5 110,00	- 7 950,00
2. Industrial Processes	**2**	**40 188,67**	**34 799,85**	**32 224,99**	**31 103,18**
A. Mineral Products	2A	9 082,96	9 426,02	8 644,47	7 864,19
1. Cement production	2A1	6 197,23	6 303,21	5 584,27	4 865,32
B. Chemical Industry	2B	7 014,86	6 813,74	7 074,26	7 200,61
C. Metal Production	2C	9 957,18	12 467,69	12 669,10	12 851,66
1. Iron and steel industry	2C1	8 486,29	10 517,52	10 616,60	10 703,64
D. Non-energy products from fuels and solvent use	2D	1 069,88	1 066,80	1 004,62	972,50
E. Electronic Industry	2E	96,65	97,71	97,72	97,72
F. Product uses as ODS substitutes	2F	11 633,67	3 923,21	1 782,23	1 174,53
G. Other product manufacture and use	2G	1 333,36	1 004,61	952,52	941,93
H. Other	2H	0,10	0,07	0,07	0,07
3. Agriculture	**3**	**70 386,15**	**68 144,99**	**65 851,86**	**63 958,61**
A. Enteric Fermentation	3A	33 136,51	32 314,60	31 171,06	29 950,12
B. Manure Management	3B	6 146,24	4 944,77	4 593,41	4 724,27
C. Rice Cultivation	3C	38,23	38,25	38,28	38,31
D. Agricultural Soils[2]	3D	29 169,35	28 996,38	28 255,39	27 509,46
E. Prescribed Burning of Savannas	3E	-	-	-	-
F. Field Burning of Agricultural Residues	3F	36,99	36,65	36,13	35,61
G. Liming	3G	640,81	633,58	622,73	611,87
H. Urea application	3H	1 036,18	1 004,48	965,44	926,40
I. Other carbon-containing fertilizers	3I	181,84	176,28	169,42	162,57
J. Other	3J	-	-	-	-
4. Land use, land-use change and forestry(1)	**4**	- 14 005,48	- 22 803,89	- 18 348,39	- 15 673,58
A. Forest land	4A	- 30 426,85	- 31 129,12	- 26 680,37	- 22 217,57
B. Cropland	4B	13 256,41	9 828,36	10 659,98	10 211,63
C. Grassland	4C	- 8 310,23	- 5 947,81	- 5 891,03	- 6 245,27
D. Wetlands	4D	504,48	472,73	458,93	447,12
E. Settlements	4E	11 527,15	7 664,35	6 001,80	4 534,57
F. Other land	4F	-	-	-	-
G. Harvested wood products	4G	- 814,43	- 3 920,14	- 3 125,44	- 2 631,79
H. Other	4H	257,99	227,74	227,74	227,74
5. Waste	**5**	**17 658,14**	**15 792,98**	**11 832,66**	**9 328,72**
A. Solid Waste Disposal	5A	11 964,89	9 591,95	5 418,36	2 595,95
B. Biological treatment of solid waste	5B	1 340,37	1 522,19	1 564,66	1 650,00
C. Incineration and open burning of waste	5C	1 703,74	1 906,20	2 083,61	2 343,75
D. Waste water treatment and discharge	5D	2 649,14	2 772,64	2 766,03	2 739,01
E. Other	5E	-	-	-	-

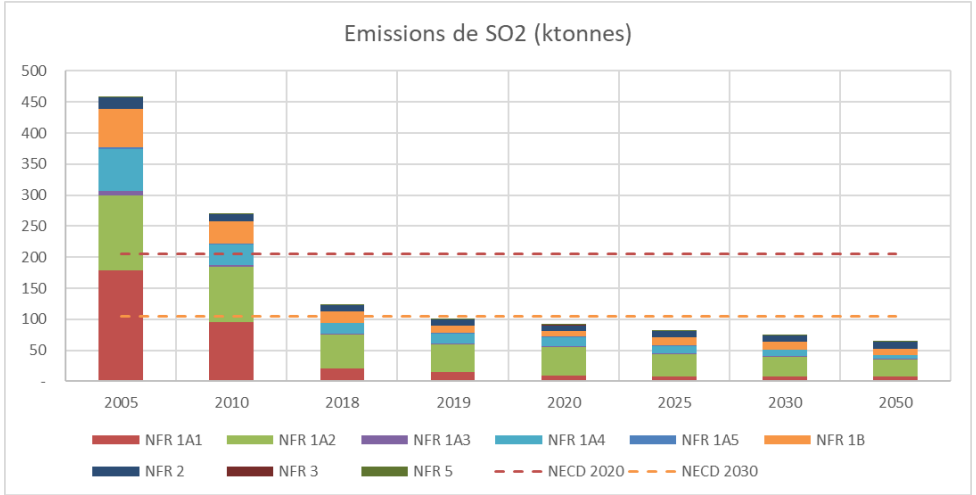
CRF format

CCO2e emissions (MtCO2e)	2020	2030	2040	2050
TOTAL without LULUCF	393,0	343,6	292,9	276,9
LULUCF	- 14,0	- 22,8	- 18,3	- 15,7
TOTAL with LULUCF	379,0	320,8	274,4	261,2
Energy				
Electricity production	17,7	4,2	4,0	10,2
Urban heating	5,5	4,1	3,9	3,9
Raffinage du pétrole	7,2	6,4	7,2	6,4
Transformation des combustibles minéraux solides	2,1	2,3	2,3	2,3
Extraction et distribution de combustibles solides	0,0	0,0	0,0	0,0
Extraction et distribution de combustibles liquides	0,1	0,7	0,0	0,0
Extraction et distribution de combustibles gazeux	1,2	1,0	1,0	1,0
Autres secteurs de l'industrie de l'énergie	7,0	12,1	12,1	12,1
Total Industrie de l'énergie	**40,8**	**32,8**	**30,7**	**35,9**
Industry				
Chemicals	10,7	11,5	11,7	11,8
Construction	3,0	3,2	2,8	2,8
Equipment	2,0	2,3	2,1	1,9
Food industry	6,3	6,5	6,0	5,5
Ferrous Metallurgy	14,4	15,0	13,5	13,0
Non-ferrous Metallurgy	2,4	2,6	2,7	2,7
Non-metallic minerals	17,7	15,2	13,2	9,7
Paper	2,3	2,1	1,9	1,8
Other manufacturing industries	2,4	2,1	2,0	1,9
Total Industry	**72,3**	**64,5**	**57,9**	**51,9**
Waste				
Waste storage	12,0	9,6	5,4	2,6
Incineration without energy recovery	1,6	1,6	1,7	1,9
Other solid waste treatments	0,9	1,0	1,0	1,1
Sewage	0,4	0,4	0,4	0,4
Total waste	**14,7**	**12,6**	**8,5**	**5,9**
Buildings				
Heating, domestic hot water and domestic cooking	39,7	30,0	22,2	16,0
Domestic air conditioning	1,2	0,9	0,3	0,1
Domestic refrigeration	0,1	0,0	0,0	0,0
Use of household products (including paints, aerosols)	0,9	0,9	0,9	0,8
Domestic machinery (including gardening)	0,3	0,3	0,3	0,3
Garbage and domestic burning and sewage	2,8	2,8	2,9	3,0
Sub-total residential	**44,8**	**35,0**	**26,5**	**20,2**
Heating, domestic hot water and tertiary cooking	30,9	25,6	16,1	11,1
Tertiary air conditioning	1,8	0,9	0,2	0,1
Tertiary refrigeration	1,1	0,9	0,3	0,2
Use of tertiary products (including solvents, paints, aerosols, anesthesia)	0,2	0,2	0,2	0,2
Other tertiary activities (including fireworks, military activities, cremation)	1,8	0,4	0,1	0,1
Sub-total tertiary	**36,3**	**27,7**	**16,2**	**11,9**
Total buildings	*73,6*	*62,7*	*41,7*	*34,8*
Agriculture				
Sub-total breeding	**33,4**	**37,3**	**35,8**	**34,7**
Sub-total farming	**31,1**	**36,9**	**30,1**	**29,3**
Machinery, engines and boilers in agriculture/forestry	9,3	9,1	8,2	7,9
Total agriculture	**88,9**	**77,5**	**74,1**	**71,9**
Transport				
Sub-total road transport	**106,9**	**96,2**	**72,5**	**64,2**
Sub-total other transports	**6,2**	**7,4**	**7,4**	**7,4**
Total transports	**113,1**	**103,6**	**79,9**	**71,6**
International transport	*31,3*	*22,9*	*24,9*	*26,3*
LULUCF				
Forest	39,6	39,1	39,7	39,2
Cultivated land	11,3	9,0	10,7	10,2
Meadows	6,3	5,9	5,9	6,2
Wet areas	0,5	0,5	0,5	0,4
Artificialized areas	9,9	7,7	6,0	4,9
Other land				
Wood products	0,6	3,9	3,1	2,6
Dams	0,3	0,2	0,2	0,2
Total LULUCF	- 14,0	- 22,8	- 18,3	- 15,7

SECTEN format for national communications

...and air pollutants projections





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2. THE ONGOING UPDATE OF THE SCENARIO

Reinforced governance : the General Secretariat for Ecological Transition

- A new administration directly under the Prime Minister
- Coordination role among the different ministries
  - Creation of working groups for 22 subjects (housing, cars, industry, etc)
  - Ecological transition > climate
  - Putting together plan, policies, fundings to reach our targets
  - Monitoring of the whole governement action and of objective achievements
- Publication of a first progress report in June

FRANCE NATION VERTE
Agir · Mobiliser · Accélérer

Success story!

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Independant expertise : The High Council on Climate (HCC)

The High Council on Climate (HCC) is an **independent body tasked with issuing advice and recommendations to the French government** on the delivery of public measures and policies aimed at reducing France's greenhouse gas emissions.

The HCC has two strategic priorities:

- **submit an annual report** on France’s adherence to its greenhouse gas emissions reduction trajectory and on the effective delivery of measures and policies to reduce greenhouse gas emissions and develop carbon sinks.
- **issue a report every five years** on France’s low-carbon strategy and carbon budgets proposals, as well as on the greenhouse gas emissions reduction trajectory it committed to follow.

Public participation : the Citizens' Convention on Climate

- An unprecedented democratic experiment with a pannel of randomly chosen 150 citizens representative of the diversity of French society
- 1 question : **How to reduce greenhouse gas emissions by at least 40% by 2030, in a spirit of social justice?**
- 7 sessions during week-ends between octobre 2019 and June 2020
- 149 proposals were issued in the final report in june 2020
- A dedicated bill was passed in July 2021 by the Parliament for legal measures : « **Climate & Resilience Act** »

Success story!

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Participation of the private sector : the decarbonization roadmaps (« article 301 »)

- The article 301 of the Climate and Resilience Act obligates each major economic sector that emits greenhouse gases to publish a decarbonization roadmap, compatible with the national strategy
- Roadmaps have been conceived from 2021 to 2023, with first publications in May 2023
- Private companies and their representant commit themselves to respect ambitious decarbonization trajectory, and identify relevant measures

Success story!

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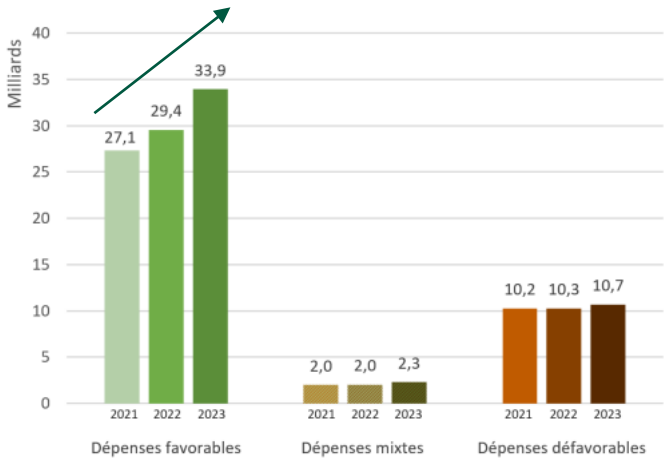
Green budgeting each year since 2021

Success story!

- Since 2021, the governement published each year a green budget
- The "green budget", a document annexed to the 2023 budget bill, focuses on measuring the impact of the State budget on the environment.
- In 2023 - excluding the impact of rising energy prices and the stimulus package - pro-environment State budget spending will amount to €33.9bn, while mixed and unfavorable spending will be stabilized, i.e. an additional expenditure of €4.5bn compared to 2022.
- The increase in so-called "green" spending is in line with the government's environmental ambitions and will be used in 2023 to carry out concrete actions such as energy-efficient renovation of buildings, financing clean mobility, etc.



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ANNEX

1. FRANCE'S CURRENT CLIMATE POLICY FRAMEWORK

1.2. SECTORAL INSIGHTS

PaMs in 2020 scenario

- Freezes the carbon component at the end of 2018
- Extension of the energy saving certificate scheme until 2050
- Extension of the heat fund until 2050
- End of the sale of new cars and light commercial vehicles emitting greenhouse gases in 2040
- Demand side measures inducing a modal shift.
- RT2012, an extension of the eco-PTZ, eco-PLS tax credit, and subsidies for the thermal renovation until 2050.
- Target for the disappearance of the most-energy consuming homes from 2030
- Raising the price of ETS quotas on the market
- Extension of the heat fund, the energy saving certificates, and innovation subsidies under the Investment Program for the future until 2050 for the industry
- Awarness raising measures for a quality diet

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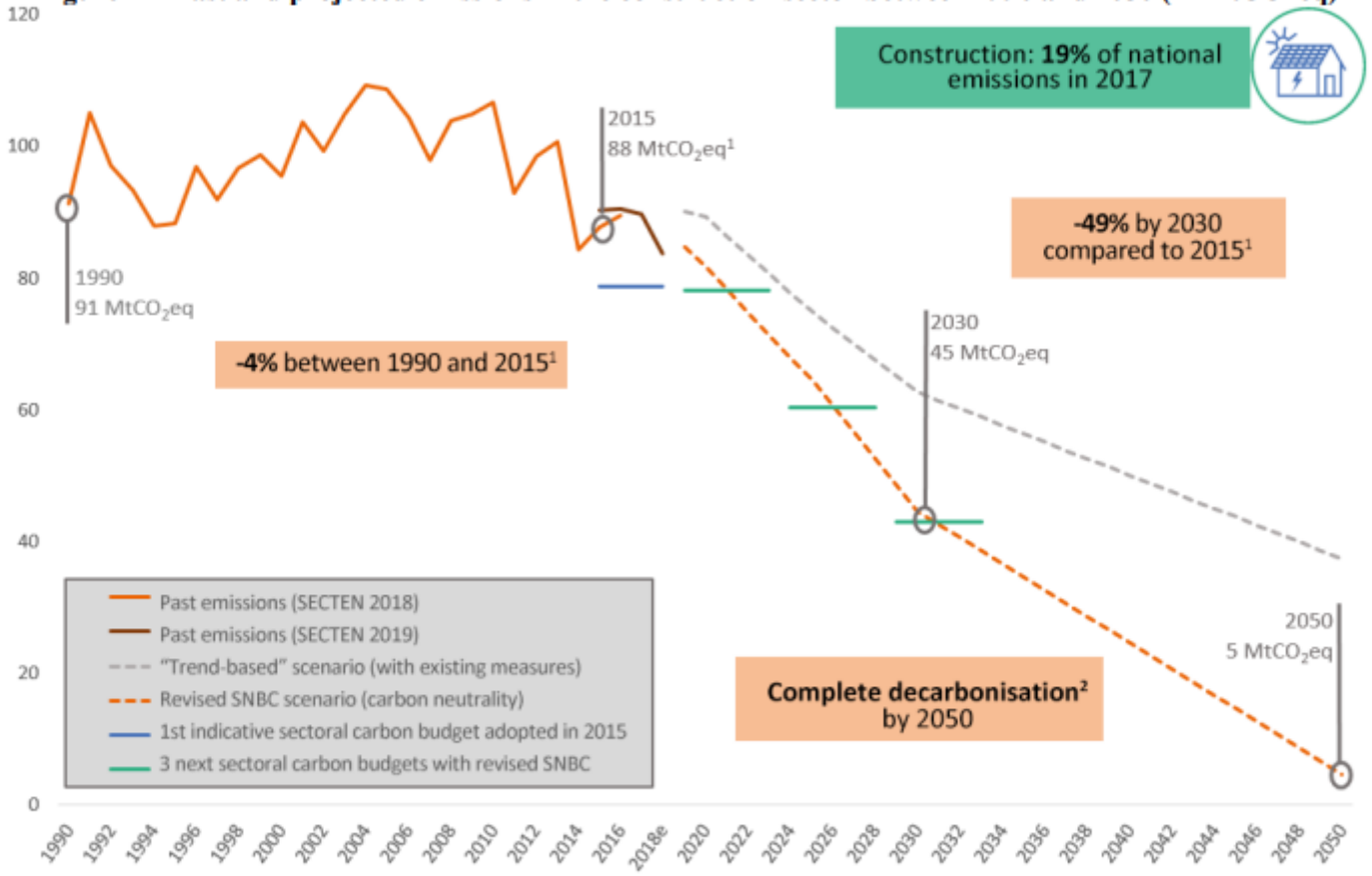
Figure 11- Past and projected emissions in the construction sector between 1990 and 2050 (in MtCO2eq)



[1]The emissions used for the year 2015 are those of the CITEPA SECTEN 2018 inventory.
[2]Does not take into account "incompressible" residual gas leaks (fluorinated gases, renewable gases).

100 % low-energy buildings by 2050

- Massively retrofit public and private building stocks
- Use a blanced heating mix based on heat pumps, heating networks and to a lesser extent biomass and biogas
- Insist on equipment energy efficiency and life cycle material impact
- Develop sobriety

Evolution of GHG emissions (2015 baseline)	
2030	2050
-49 %	**Complete Decarbonization**

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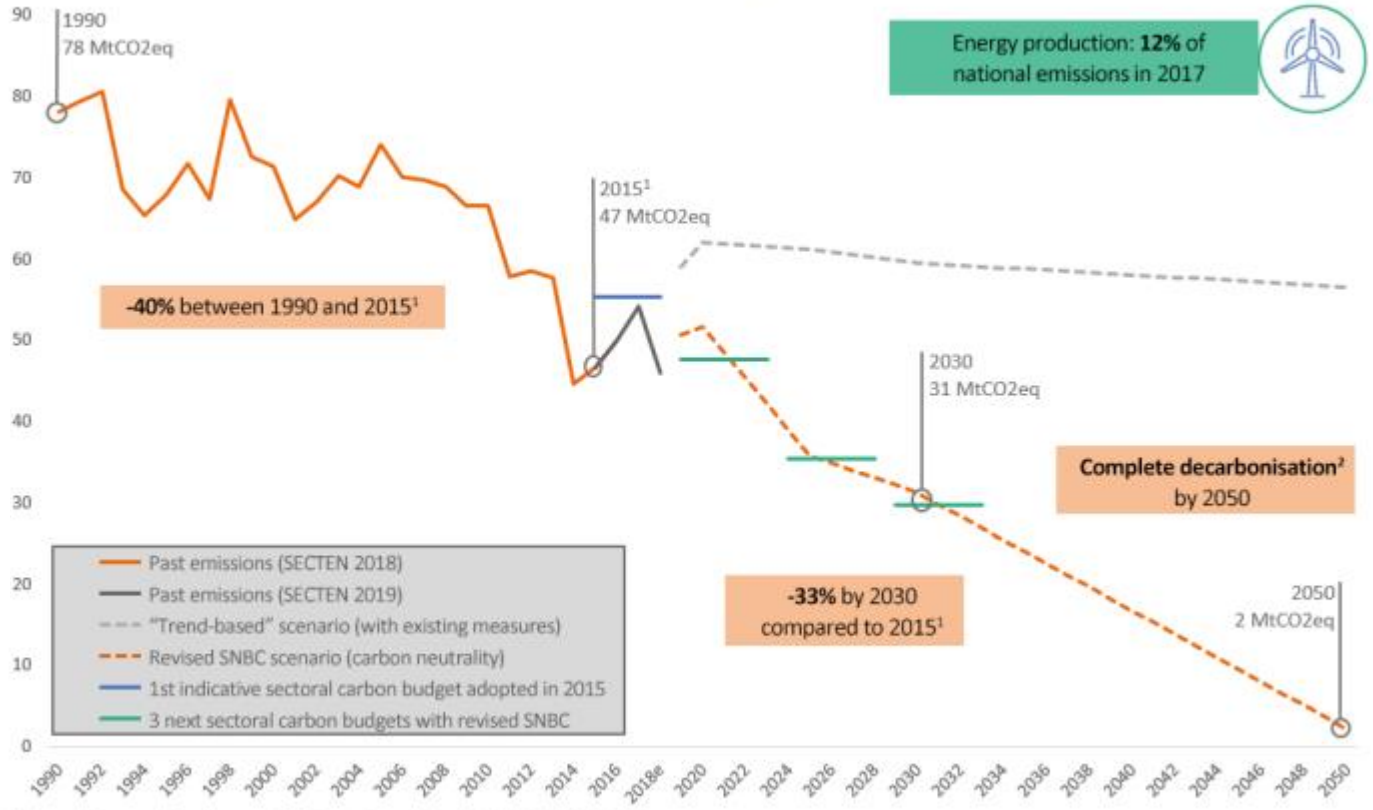
Figure 15 - Past and projected emissions in the energy production sector between 1990 and 2050 (in MtCO2eq)



[1] *The emissions used for the year 2015 are those of the CITEPA SECTEN 2018 inventory.*
[2] *Excludes residual emissions from fossil fuels for aviation and marine transport and residual leakage, including methane.*

Developing low-carbon energy resources

- Closing down the few remaining coal powerplants
- High mobilization of biomass
- Development of electric renewable energies

Evolution of GHG emissions (2015 baseline)	
2030	2050
-33 %	**Complete Decarbonization**

Figure 16 - Sources of energy which could meet the final energy needs in 2050

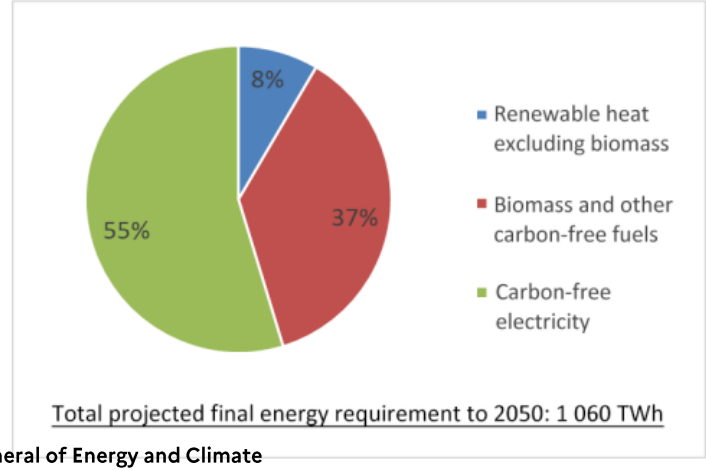


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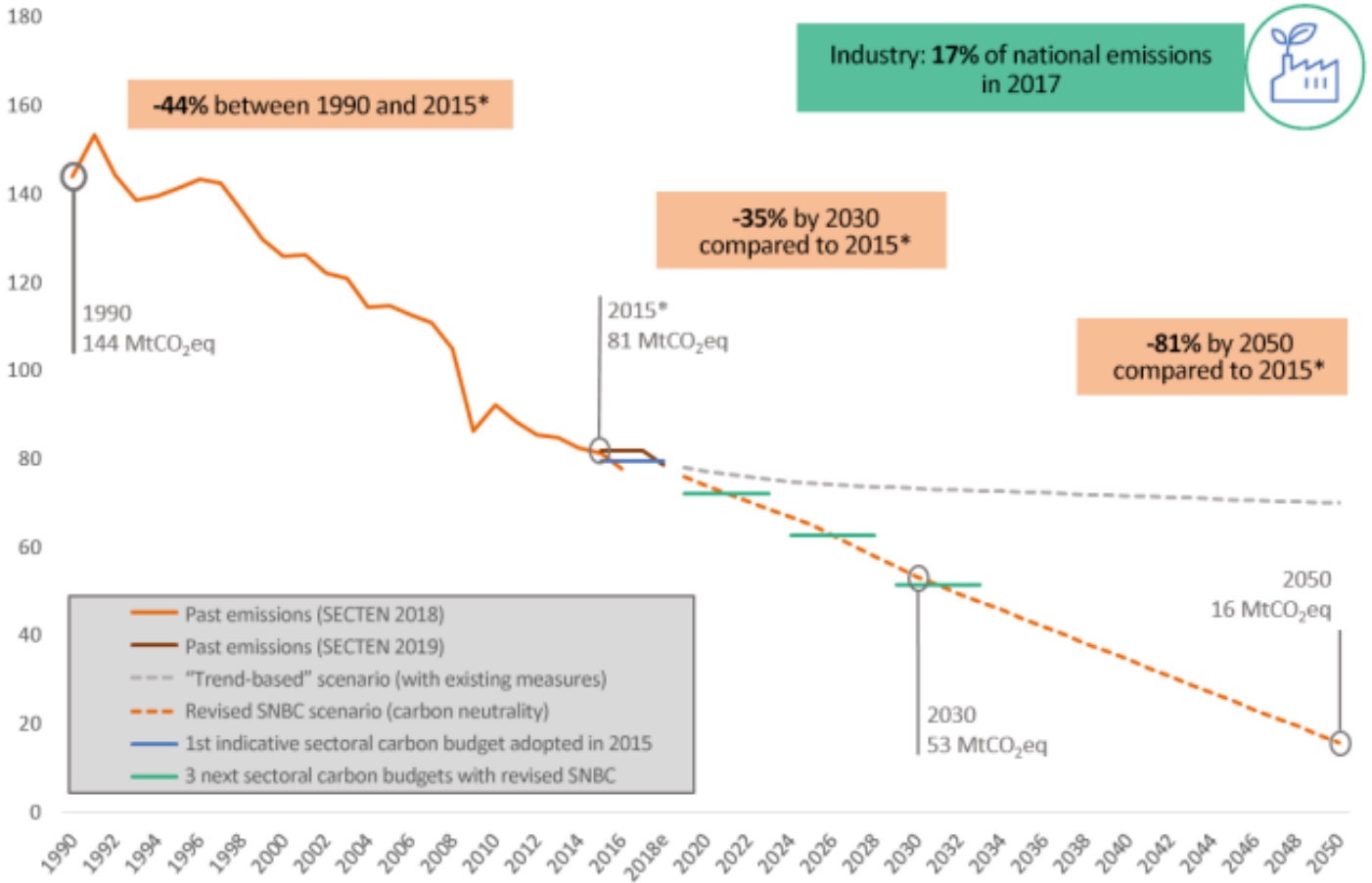
Figure 14 - Past and projected emissions in the industrial sector between 1990 and 2050 (in MtCO2eq)



*The emissions used for the year 2015 are those of the CITEPA SECTEN 2018 inventory

Developing low-carbon industries

Energy efficiency of branches and decarbonization of energy (biomass, biogas, electricity), enhancing eco-design and circular economy

Evolution of GHG emissions (2015 baseline)	
2030	2050
-35 %	**-81%**

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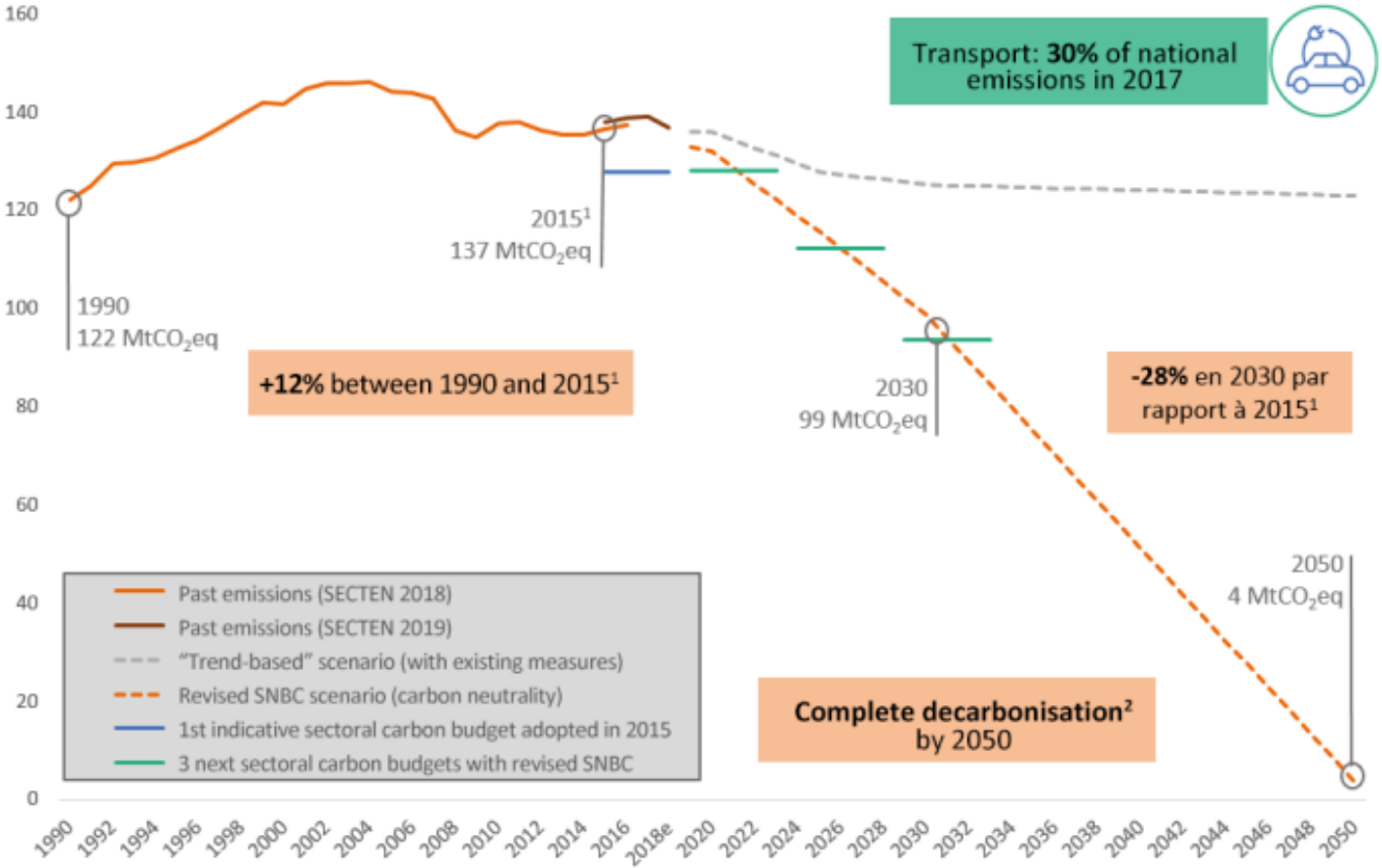
Figure 10 - Past and projected emissions in the transport sector between 1990 and 2050 (in MtCO2eq)



[1]*The emissions used for the year 2015 are those of the CITEPA SECTEN 2018 inventory.*
[2]*Does not take into account "incompressible" residual leakage of gases (fluorinated gases, renewable gases) and residual emissions from domestic air transport*

Decarbonizing mobility

- Limit the increase of passenger and goods trafic (modal shift, car sharing, coworking)
- Electrify passenger cars (100 % electric fleet by 2050)
- Base goods transportation on new technologies (gas, electricity, hydrogen, biofuels…)
- Insist on vehicle performances

Evolution of GHG emissions (2015 baseline)	
2030	2050
-28 %	**Complete Decarbonization**

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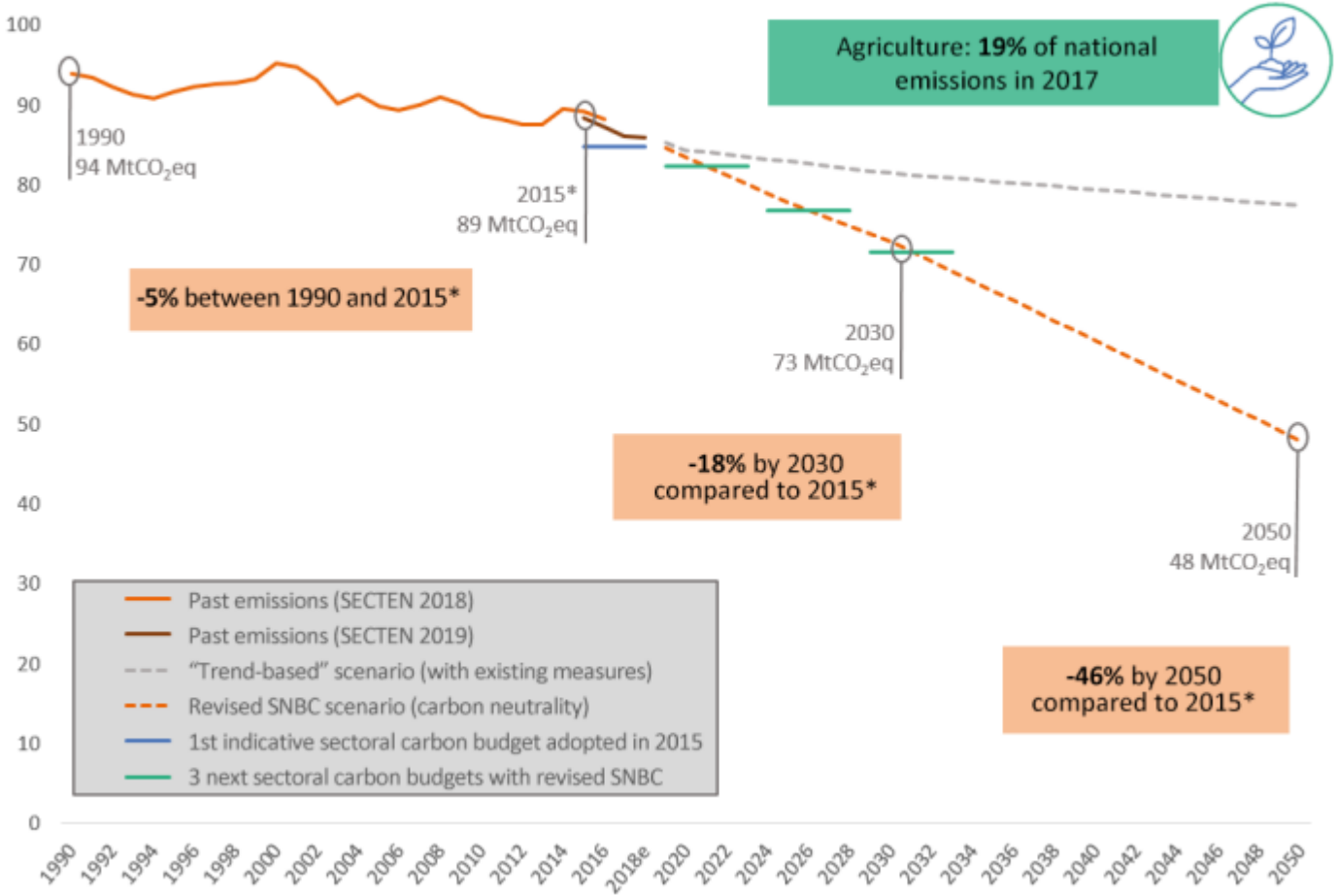
Figure 12- Past and projected emissions in the agriculture sector (excluding land) between 1990 and 2050 (in MtCO2eq)



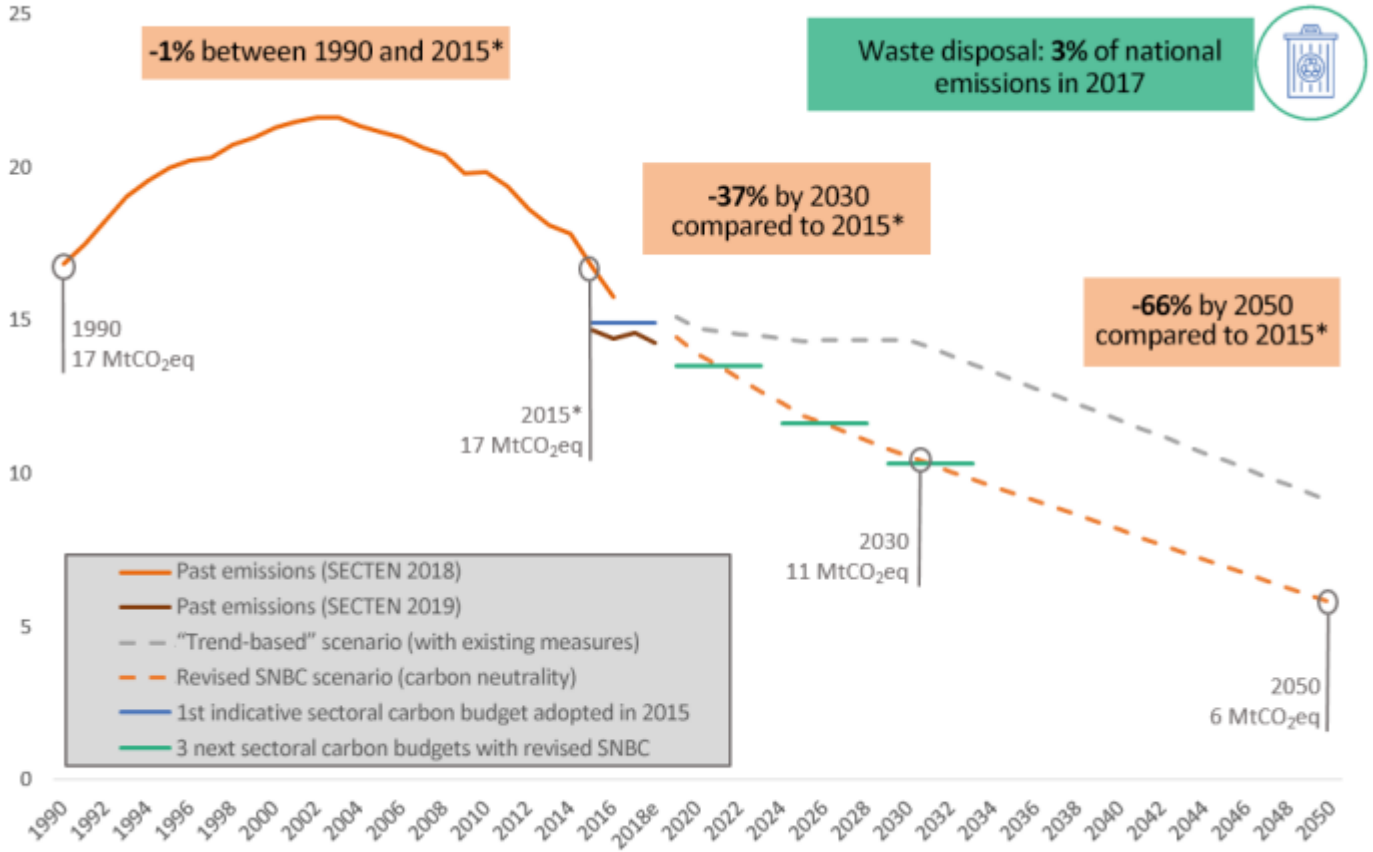
The emissions data for the year 2015 are those of the CITEPA SECTEN 2018 inventory.

Promoting low-carbon practices in agriculture

- Support the development of new technologies and practices (agro-ecology, precision farming, organic farming…) in order to decrease use of nitrogen-based fertilizers and reinforce soil carbon absorption
- Develop energy and material production to feed the growing bio-economy
- Change consumption habits by reducing wastage and respecting public health recommendations leading to diet alterations

Evolution of GHG emissions (2015 baseline)	
2030	2050
-18 %	**-46 %**

Figure 16 - Past and projected emissions in the waste sector between 1990 and 2050 (in MtCO2eq)



*The emissions used for the year 2015 are those of the CITEPA SECTEN 2018 inventory.

Preventing and maximizing the value of waste

- Reduce waste production and enhance (bio)waste recovery
- Respect waste treatment hierarchy

Evolution of GHG emissions (2015 baseline)	
2030	2050
-37 %	**-66%**

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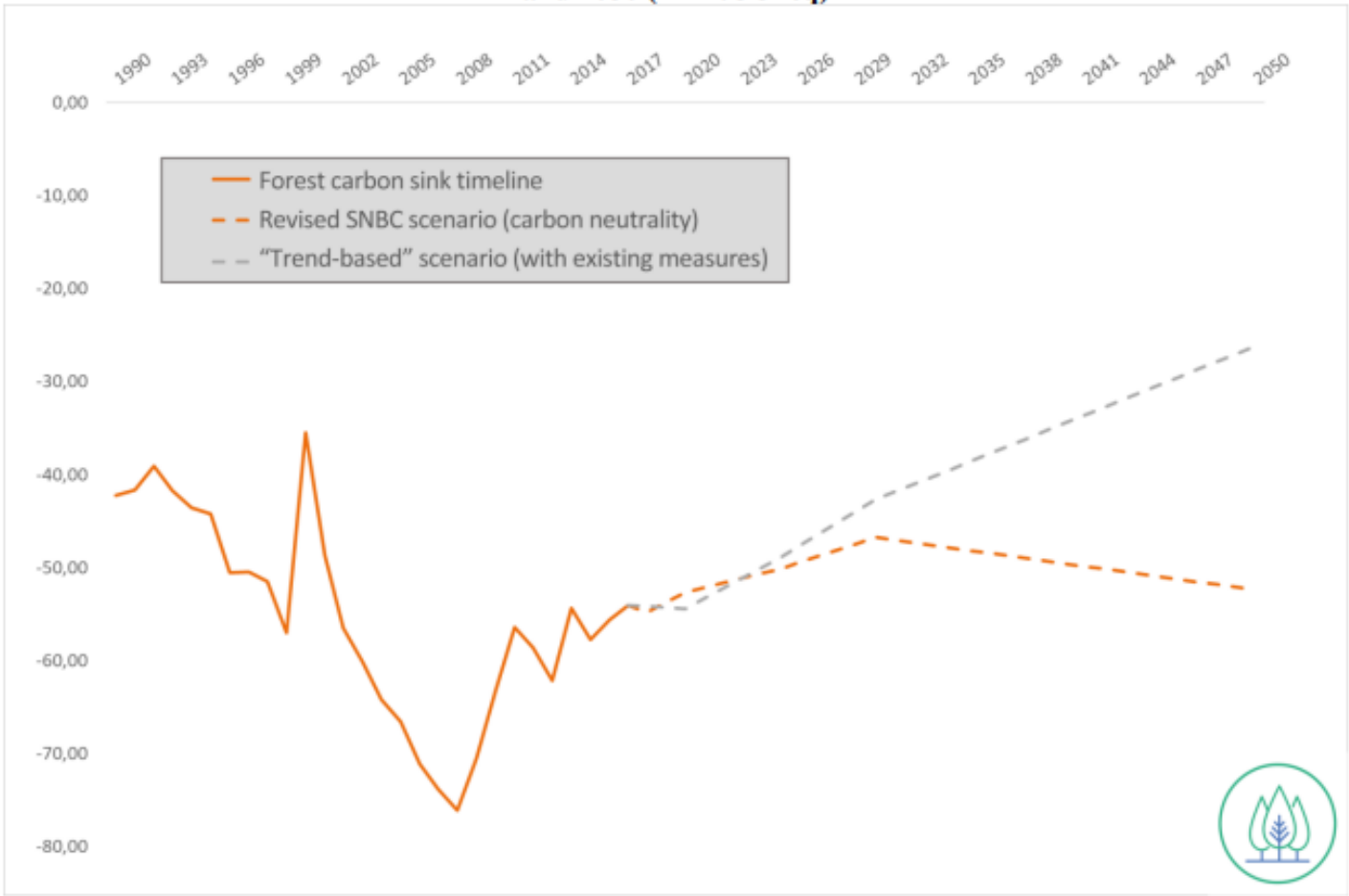
Figure 13 - Past and projected forest sector carbon sink (forest and wood product ecosystems) between 1990 and 2050 (in MtCO2eq)



Maximizing the carbon sinks and developing bioeconomy

- Develop the use of natural products, e.g. wood, for materials and products with high added value and long lifetime, develop forestry and adapt forests to climate change, taking biodiversity into account
- Stop net artificialisation

Evolution of GHG emissions (2015 baseline)
2050
+50 % absorption

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2. THE ONGOING REINFORCEMENT OF CLIMATE POLICIES

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2. THE ONGOING REINFORCEMENT OF CLIMATE POLICIES

2.1. A EUROPEAN IMPULSION : THE GREEN DEAL

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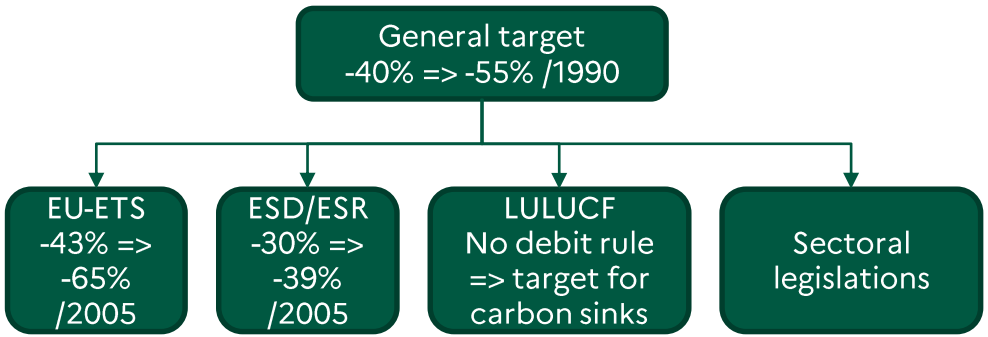
Enhanced EU ambition in light of the best available science

- **In December 2020, the EU Council has endorsed a new EU greenhouse gas emissions reduction target of at least 55% by 2030 compared to 1990. In 2021, the European climate law aims at carbon neutrality in 2050.**
- In July 2021, the Commission has put foward a series of legislative proposals in order to implement this increased ambition
- Negotiations are being finalized, with several main texts already adopted (e.g. EU-ETS, ESR, CO2 emissions of cars and vans, etc.)

Success story!



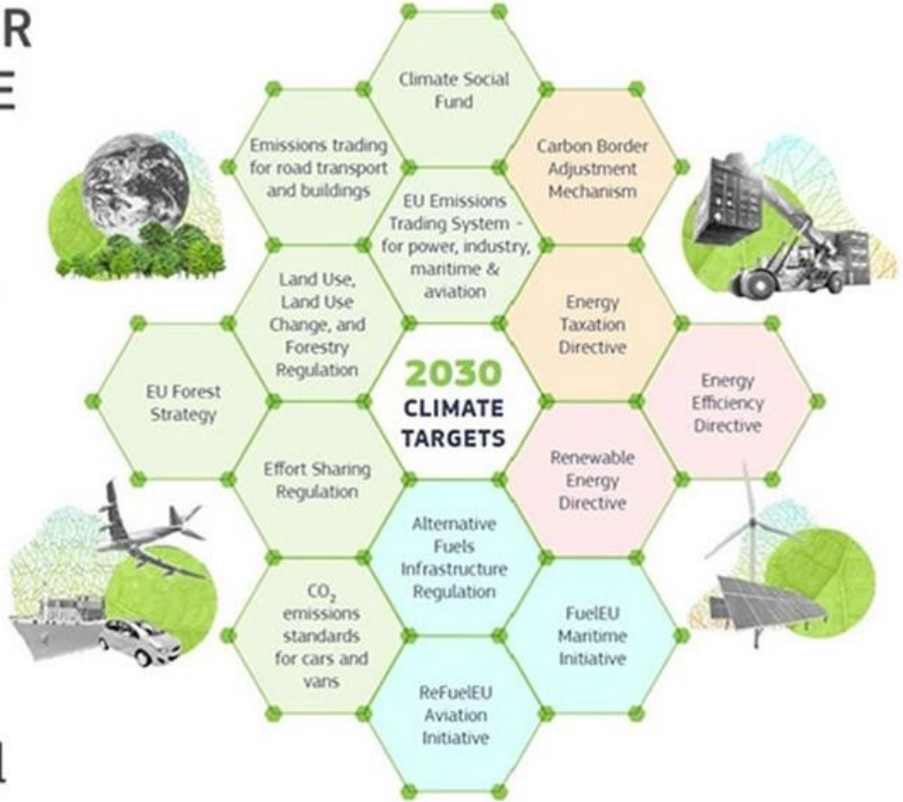
A strong european climate framework to reach our climate goals

- EU-ETS : one of the main carbon markets in the world
- Effort sharing regulation : each EU MS being attributed an individual targets for sectors not included in the ETS
- LULUCF regulation
- Sectoral legislations (vehicules, buildings, agriculture, etc.)
- Frequent reporting

EUROPEAN GREEN DEAL

REACHING OUR 2030 CLIMATE TARGETS

European Commission



#EUGreenDeal

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An ambitious legislative package : « Fit for 55 »

A quick overview of the « Fit for 55 » package (about 12 « laws » in total) :

- Strenghtened decarbonization pace for the **EU-ETS**
- strenghtened **CO2 standards** for new cars, vans, and trucks, with a view to stop the sale of internal combustion of light vehicles by 2035
- Creation of a **Carbon Border Ajustment Mechanism** for specific industrial products
- Creation of a **new European carbon market for energy consumption of road transport and buildings** from 2026
- Several objectives for Member states, coherent with the -55% objective :
    - energy efficiency objectives
    - renewable energy objectives
    - National climate objectives for the sectors not covered by the European carbon market

- Etc.

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ANNEX

2. THE ONGOING REINFORCEMENT OF CLIMATE POLICIES

2.3. THE UPDATE OF CLIMATE POLICIES

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The French strategy on energy and climate

Need to strenghen the
French climate ambition

STRATÉGIE FRANÇAISE
SUR L'ÉNERGIE
ET LE CLIMAT

SFEC will be **France's new roadmap** to achieve carbon neutrality by 2050 and to ensure its adaptation to the impacts of climate change

3 updated strategies : on climate, energy, and adaptation (2024)

The French strategy on energy and climate

STRATÉGIE FRANÇAISE
SUR L'ÉNERGIE
ET LE CLIMAT

The three main strategical documents will be updated in 2024-2025, to precise and make operational the orientations and objectives of the law :

- **the National Low Carbon Strategy (SNBC)**
- **the Multiannual Energy Program (PPE)**
- **the National Climate Change Adaptation Plan (PNACC).**

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Main new insights

Work in progress

- **Capitalize on the various works** carried out following the adoption of the previous strategies on climate, energy and adaptation + national agencies works + NGOs studies
- Integrate a **carbon footprint** budget and associated measures
- Plan the **energy mix** in the long term, and the implications for infrastructures ; electricity and biomass challenge
- Ensure that **fair support measures** are implemented for households and companies
- Strengthen the link with **territorial planning** (regional renewable energy objectives, adaptation, etc.)
- Consider the **future climate** to optimize adaptation

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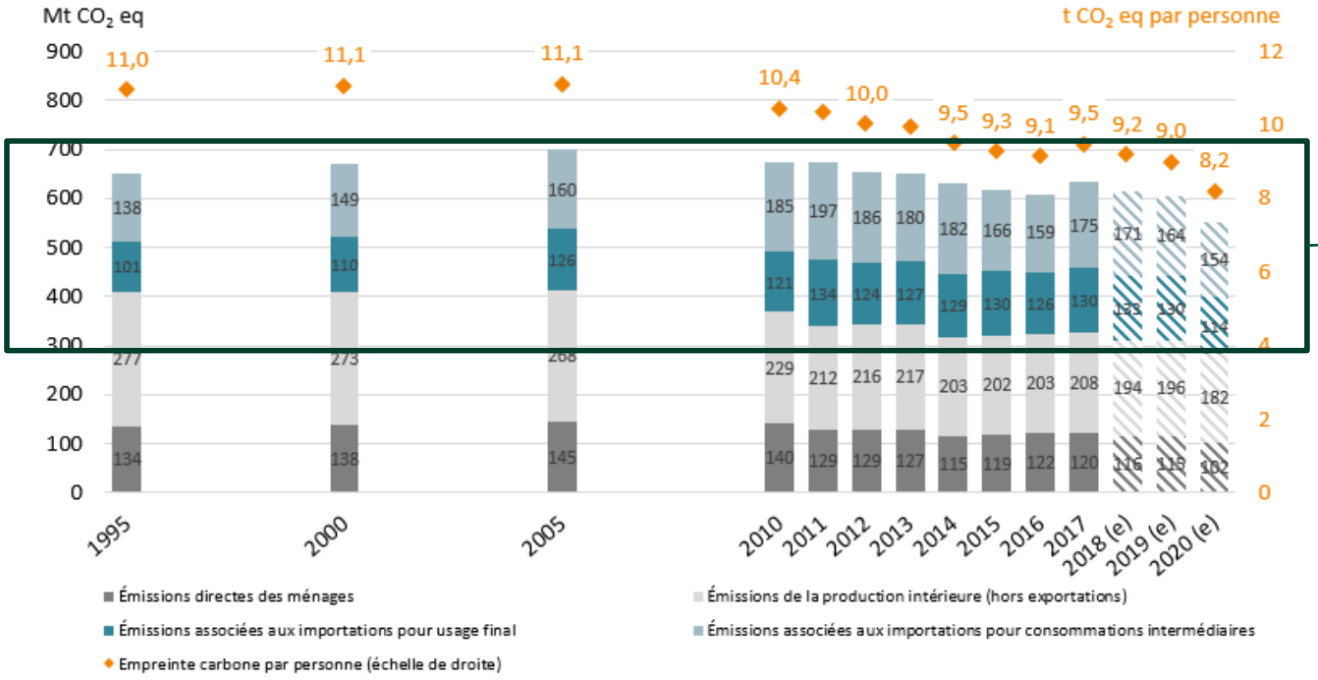
Work in progress

Carbon footprint

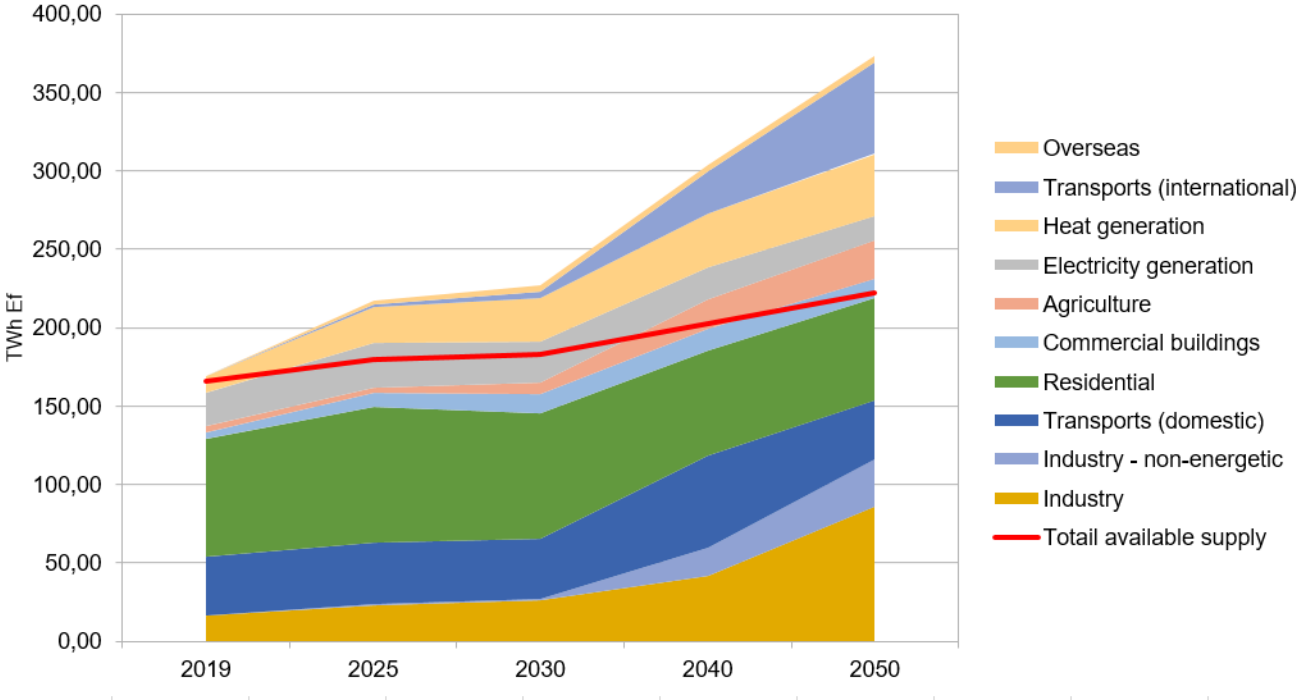


51% of the carbon footprint is imported !

Creation of carbon budgets for the carbon fooprint

Work in progress

Availability of biomass ressources

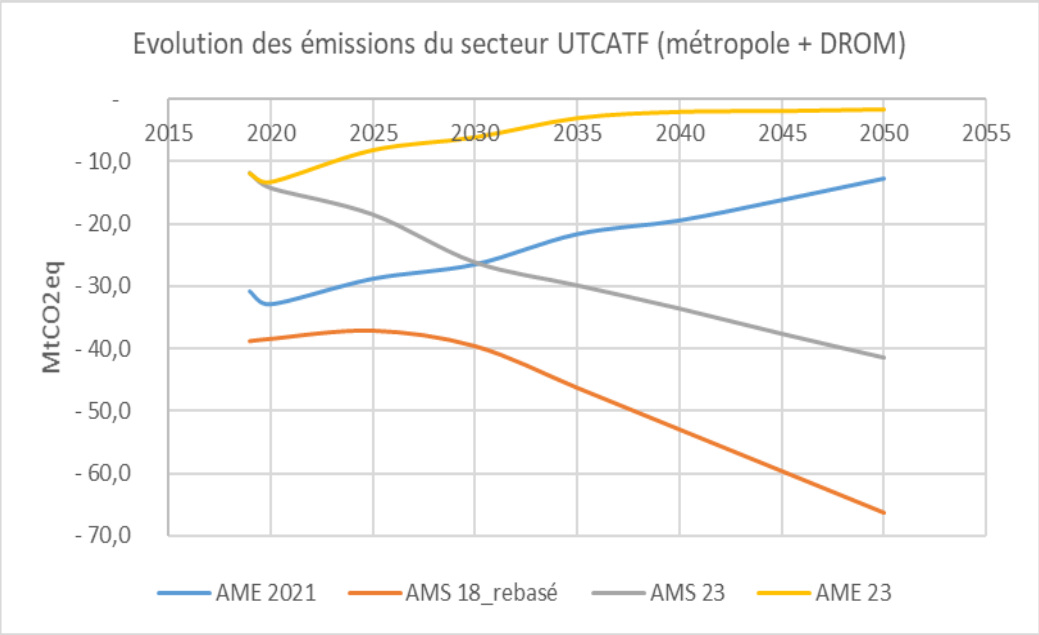


Biomass is a cost-effective lever for decarbonization in various sectors

But our analysis shows that there is unsufficient supply for the expected demand post-2030

Work in progress

Impacts of climate change on the land sink



Carbon sinks are necessary to reach climate neutrality in 2050

Difficulties to assess their level in a context of a changing climate