



CPB Netherlands Bureau for
Economic Policy Analysis

Evaluation of Cabinet variants industry and draft Climate Agreement

CPB Communication

June 2019

1 Introduction

At the request of the Minister of Economic Affairs and Climate Policy, this report contains a number of variants for industry. The variants concern a replacement of the malus scheme from the draft Climate Agreement by other tax rates on energy and storage of renewable energy (ODE) in combination with a carbon (CO₂) tax for industry. The resulting tax revenues will be used to increase spending on sustainability subsidies for businesses. A full description of the variants is provided in the appendix. The report presents the effects on budgets, costs and incomes.¹ The variants have been analysed according to the same method used for the evaluation of the draft Climate Agreement.²

The effects of the variants for industry are considered in conjunction with the climate and energy policy implemented by the current Cabinet and its predecessors.³ Effects on budgets, costs and incomes are going to occur — even without the draft Climate Agreement and Cabinet variants, which result in additions and adjustments to those effects. Furthermore, overall climate and energy policy is in line with household, business and economic perceptions, as the total change will be felt from one year to the next; the source of the impact — previously anticipated policy changes or the draft Climate Agreement — is less important.

This report takes into account both the currently expected EU ETS price (46.30 euros per tonne of CO₂ in 2030) and PBL's figures on CO₂ emissions and national costs from its middle-of-the-road scenario (carbon tax increasing up to 130 euros per tonne of CO₂ by 2030 and 80% utilisation of the reduction potential in industry).^{4, 5} Relocation of industrial activities (including their associated CO₂ emissions) to other countries as a result of the Cabinet variants is expected to be minimal.⁶ The budgetary, cost and income effects in this report, therefore, do not include any relocation effects. The estimates are point estimates without a margin of uncertainty, but this does not remove the uncertainty surrounding these point estimates — including the uncertainty about the size of the relocation.

¹ The effects of the Cabinet variants on GDP and employment have not been assessed but are expected to be only marginal.

² A description of the assessment framework used by CPB is provided in Appendix A of CPB (2019), Evaluation of the draft Climate Agreement, CPB Communication, 13 March 2019 ([link](#)).

³ Current climate and energy policy under CPB's baseline scenario is described in Appendix B of CPB (2019), Evaluation of the draft Climate Agreement, CPB Communication, 13 March 2019 ([link](#)).

⁴ Brink C. (2018), Projectie ETS-prijs volgens uitgangspunten concept wetsvoorstel minimum CO₂-prijs elektriciteitsproductie [*projections for ETS prices according to the Bill on minimum carbon price electricity generation*], PBL Netherlands Environmental Assessment Agency, The Hague, 15 November 2018 ([link](#)).

⁵ The various scenarios are described in Koelemeijer, R. et al. (2019), Effect kabinetsvoorstel CO₂-heffing industrie [*effect Cabinet proposal carbon tax on industry*], PBL Netherlands Environmental Assessment Agency, The Hague.

⁶ This finding follows both from analyses made using the general equilibrium model WorldScan and from the so-called EBITDA approach in which the costs of a carbon tax for businesses are compared against the related gross profits (see Koelemeijer, R. et al. (2019), Effect kabinetsvoorstel CO₂-heffing industrie [*effect Cabinet proposal carbon tax on industry*], PBL Netherlands Environmental Assessment Agency, The Hague). For background information on the WorldScan model, see CPB (2006), WorldScan: A model for international economic policy analysis, CPB Document, 17 March 2006 ([link](#)), and Bollen, J. and C. Brink (2014), Air pollution policy in Europe: Quantifying the interaction with greenhouse gases and climate change policies, Energy Economics, 46 (November 2014), pp. 202–215 ([link](#)).

2 Overview of expenditures and financial burden

This chapter provides insights into the expenditures and financial burden related to overall climate and energy policy, including the draft Climate Agreement and Cabinet variants for industry, for the years 2021, 2025 and 2030. Not all of the Cabinet variants were evaluated.⁷ Variant 3a was not included, because current EU ETS price projections imply there is no difference between variants 3a and 1. Furthermore, given the level of detail of the instruments, variants 2 and 3b are very similar, in practice (both represented in variant 2 below). Variant 4 was not assessed (also not by PBL) because of a large overlap with variant 1.⁸ Tables 2.1 and 2.2 show both the expenditures and financial burden related to overall climate and energy policy, including the draft Climate Agreement and Cabinet variants 1 and 2, which show the mutations to the agreement under the respective variants. Details of both variants are provided in the appendix. Not all the necessary data were available to calculate the spending increases and financial burden for the reference years of 2021 and 2025.⁹

Table 2.1 Overview of expenditures and financial burden. Cabinet variant 1 (billion euros, 2018 price level)

	Overall climate and energy policy, including draft Climate Agreement and Cabinet variant 1 for Industry ^a			Mutation Cabinet variant 1 for Industry compared to overall climate and energy policy, including draft Climate Agreement ^b		
	2021	2025	2030	2021	2025	2030
Net spending increase	4.2+NA	4.8+NA	4.4	NA	NA	
Total policy-related financial burden	3.5+NA	4.5+NA	4.9	-0.2+NA	-0.2+NA	-0.3
- Households	1.8	2.0	2.4	-0.6	-0.7	-0.7
- Businesses	1.6+NA	2.4+NA	2.3	0.4+NA	0.4+NA	0.4
- Abroad	0.1	0.2	0.2			
Non-EMU-related financial burden	0.2	1.2	1.9	+0.0	+0.0	0.3
- Households	0.0	0.1	0.3	+0.0	+0.0	+0.0
- Businesses	0.2+NA	1.0+NA	1.6	+0.0+NA	+0.0+NA	0.2

a) Overall current policy on climate and energy and the draft Climate Agreement, supplemented by Cabinet variant 1 for industry (replacing the original malus scheme and baseline scenario of the shift in energy tax from the draft Climate Agreement).
b) Mutation according to Cabinet variant 1 for industry, in relation to current climate and energy policy and the draft Climate Agreement (including the baseline scenario of the shift in energy tax and without malus scheme; see CPB (2019), Evaluation of the draft Climate Agreement, CPB Communication, 13 March 2019, [link](#)).
 Cells without mutation have been left empty. +0.0 (-0.0) means a limited positive (negative) mutation.
 NA = not available.

The carbon tax in variant 1 is designed as a minimum price compared to the EU ETS price (CO₂ minimum price) and is not projected to yield any budgetary return. The Cabinet proposes to introduce the evaluated minimum CO₂ price in 2021. The feasibility of introducing this within such a timeframe, however, depends on

⁷ For a description of all the Cabinet variants, see, for example: Koelemeijer, R. et al.(2019), Effect kabinetsvoorstel CO₂-heffing industrie [effect of Cabinet proposal carbon tax on industry], PBL Netherlands Environmental Assessment Agency, The Hague.

⁸ Koelemeijer, R. et al.(2019), Effect kabinetsvoorstel CO₂-heffing industrie [effect of Cabinet proposal carbon tax on industry], PBL Netherlands Environmental Assessment Agency, The Hague.

⁹ PBL reports only the effects for 2030. For the reference years 2021 and 2025, the effects were based on informal data exchange between PBL and CPB.

the design of the tax, the technical complexity of the implementation and on how much time the legislative process of implementation would take. A delay in any one of these factors means that 2022 would be the next first feasible year of implementation. PBL has determined the minimum CO₂ price (above a tax-free base) in such a way that the intended emission reduction could be achieved with a likelihood of 50%. The 2030 tariff is expected to cause businesses to opt for reducing their emissions down to the level of the tax-free rate. As the tax base would thus be zero, the minimum CO₂ price would not yield a budgetary return. The additional investments by businesses to reduce their emissions and thus avoid having to pay the carbon tax will become visible in their higher non-EMU-related financial burden.

Furthermore, Cabinet variant 1 replaces several measures from the draft Climate Agreement. The shift from electricity to natural gas in the energy tax will be replaced by an alternative in combination with higher tax reductions. A minimum CO₂ price for businesses that fall under the EU ETS, waste incineration plants and caprolactam producers will replace the malus scheme. Variant 1 also modifies the ODE tariffs in nearly all tax brackets. Compared to overall climate and energy policy, including the draft Climate Agreement, variant 1 will reduce the financial burden on households by 0.6 billion euros in 2021 and by 0.7 billion euros in 2025 and 2030. This is mainly due to the further increase in energy tax reduction. Variant 1 will increase the financial burden on businesses by 0.4 billion euros, plus another yet unknown amount in 2021 and 2025, and 0.4 billion euros in 2030, mainly as the result of higher ODE tax rates for businesses. As a result, the overall climate and energy policy, including the draft Climate Agreement with variant 1, will lead to a policy-related increase in financial burden of 2.4 billion euros for households and 2.3 billion euros for businesses in 2030. Any revenues from the minimum CO₂ price will be used to increase spending on sustainability subsidies for businesses. In 2030, there will be no emissions above the tax-free rate and, therefore, also no related tax revenues. Compared to overall climate and energy policy, including the draft Climate Agreement, variant 1 will not alter the increase in spending in 2030. In addition, in 2030, the carbon tax in variant 1 will lead to 0.2 billion euros in non-EMU-related financial burden on businesses investing in emission-reducing technologies.

Table 2.2 Overview of expenditures and financial burden, Cabinet variant 2 for Industry (billion euros, 2018 price level)

	Overall climate and energy policy, including draft Climate Agreement and Cabinet variant 2 Industry ^a			Mutation Cabinet variant 2 Industry compared to overall climate and energy policy, including draft Climate Agreement ^b		
	2021	2025	2030	2021	2025	2030
Net spending increase	4.4+NA	5.1+NA	4.6	0.3+NA	0.2+NA	+0.2
Total policy-related financial burden	3.7+NA	4.8+NA	5.0	0.1+NA	-0.0+NA	-0.1
- Households	1.8	2.0	2.4	-0.6	-0.7	-0.7
- Businesses	1.8+NA	2.6+NA	2.5	0.7+NA	0.6+NA	0.5
- Abroad	0.1	0.2	0.2			
Non-EMU-related financial burden	0.2	1.2	1.9	+0.0	+0.0	0.3
- Households	0.0	0.1	0.3	+0.0	+0.0	+0.0
- Businesses	0.2+NA	1.0+NA	1.6	+0.0+NA	+0.0+NA	0.2

a) Overall current policy on climate and energy and the draft Climate Agreement, supplemented by Cabinet variant 2 for industry (replacing the original malus scheme and baseline scenario of the shift in energy tax from the draft Climate Agreement).
b) Mutation according to Cabinet variant 2 for industry, in relation to current climate and energy policy and the draft Climate Agreement (including the baseline scenario of the shift in energy tax and without malus scheme; see CPB (2019), Evaluation of the draft Climate Agreement, CPB Communication, 13 March 2019, [link](#)).
 Cells without mutation have been left empty. +0.0 (-0.0) means a limited positive (negative) mutation.
 NA = not available

In Cabinet variant 2, the original shift in energy tax and the malus scheme from the draft Climate Agreement will be replaced by the same elements as under variant 1, plus a flat carbon tax rate of 5 euros on industrial emissions. Compared to overall climate and energy policy including the draft Climate Agreement, variant 2 will reduce the financial burden on households by 0.6 billion euros in 2021 and 0.7 billion euros in 2025 and 2030, mainly due to higher energy tax reductions. For businesses, variant 2 will increase the financial burden by 0.7 billion euros plus an unknown amount in 2021, 0.6 billion euros plus an unknown amount in 2025, and by 0.5 billion euros in 2030. The increase in financial burden is the result of the higher ODE tax rates for businesses and the flat carbon tax rate under this variant. Overall climate and energy policy, including the draft Climate Agreement with variant 2, will lead to a policy-related increase in the financial burden in 2030 of 2.4 billion euros for households and 2.5 billion euros for businesses. The revenues from the flat carbon tax rate of 0.2 billion euros will be earmarked for an increase in spending on sustainability subsidies for businesses. Finally, in 2030, the carbon tax under this variant will lead to 0.2 billion euros in non-EMU-related financial burden on businesses investing in emission-reducing technologies.

3 Income effects

This section shows the income effects of overall climate and energy policy, including the draft Climate Agreement and the Cabinet variants. As in the evaluation of the draft Climate Agreement, the income effects were also determined using the Mimosi model, including the model expansion developed for this purpose.^{10,11} In variants 1 and 2, the measures are the same for households. From here, onwards, therefore, they are treated as being the same package of measures. However, the business-related transfer effects differ between the two variants, which is why two separate income effects with delayed impact were calculated. First, the deviating measures in the variants are compared against the draft Climate Agreement.

Cabinet changes compared to the draft Climate Agreement:

Changes with a positive impact on income

- The decrease in energy tax will be increased by 78 euros, excluding VAT (0.8 billion euros).
- Sustainable Energy Storage (ODE) tax will be decreased for electricity consumption (0.05 billion euros)

Changes with a negative impact on income

- The tax on electricity will be decreased by less (0.0 billion euros).
- The tax on natural gas will be increased (0.1 billion euros)
- Sustainable Energy Storage (ODE) tax will be increased for natural gas consumption (0.03 billion euros).
- Higher costs related to grid tariffs due to the necessary construction of additional power grids (0.03 billion euros).

Income effects without delayed impact

For the evaluation of the effects on income, we initially used the definition of static purchasing power, as we normally do. This definition provides insight into the direct effects of policy, assuming that households and businesses will not change their behaviour. Under these static income effects, for example, we assumed

¹⁰ CPB (2016), Mimosi: Micro-simulation model on taxation, social security, wage costs, and purchasing power loonkosten en koopkracht, CPB Achtergronddocument, 30 maart 2016 ([link](#)).

¹¹ CPB, 2019, Methodological basis of the evaluation of income effects from the draft Climate Agreement, CPB Background document, 13 March 2019 ([link](#)).

households not to adjust their energy consumption, and businesses not to attempt to pass any increase in costs on to households.

The changes in the Cabinet variants will have a slightly positive impact on the income effect of overall climate and energy policy up to and including 2030. Increasing the reduction in energy tax will reduce the income effect of overall climate and energy policy up to and including 2030, from an average of -1.3% to an average of -1.0%. The income effect resulting from the draft Climate Agreement will decrease, from -0.4% to -0.2%. The other changes will have little effect on household income.

The changes in the Cabinet variants in 2030 will be relatively favourable for lower incomes. This is also due to the increase in the energy tax reduction. As a result of the changes to the Cabinet variants, the lowest incomes will then be slightly better off, as a result of the draft Climate Agreement.

Lower incomes (-1.3%) will decline more than higher incomes (-0.6%), due to overall climate and energy policy up to and including 2030, but the difference between the two groups is smaller than in the draft Climate Agreement. The stronger decline for the lower income groups will be mainly due to the already implemented climate and energy policies up to and including 2030.

Income effects with delayed impact

In addition to the direct effects, income effects with possible delayed-impact effects are also outlined. A provisional estimate was made of the impact of the policy. In this approach, businesses try to pass on an increase in their financial burden and households also adjust their behaviour. The differences in the delayed-impact effects between income groups is not easy to estimate. We, therefore, decided to only make a general calculation that provides a tentative impression of the total of all income groups.

The changes in the Cabinet variants will lead to greater delayed-impact effects. The delayed-impact effects will increase because businesses are expected to pass on costs to a greater degree. In current climate and energy policy, including the draft Climate Agreement, this effect is equal to -0.6%, but increases to -0.7% in variant 1 and to -0.8% in variant 2. The underlying assumption being that businesses will pass 80% of the increase in their financial burden on to citizens via higher tariffs or lower wages.¹² The behavioural impact of households remains unchanged compared to the overall climate and energy policy including the draft Climate Change Agreement and is equal to 0.4% in both variants.

The changes in the Cabinet variants have a slightly positive impact on the total income effect, including delayed-impact effects, up to and including 2030. The total impact is calculated as the sum of the direct effect and the delayed-impact effects. The direct income effect of overall climate and energy policy, including the draft Climate Agreement, will decrease from -1.3% to -1.0% (due to the increase in energy tax reduction). The delayed-impact effects (cost transference plus behaviour) will increase from -0.2% to -0.4%. On balance, the overall effect is 0.1% more favourable (from -1.5% to -1.4%).

¹² Addendum about cost transference, in CPB Background document 'Methodological basis of the evaluation of income effects from the draft Climate Agreement' ([link](#)).

Figure 3.1 Income effects up to and including 2030, without delayed impact

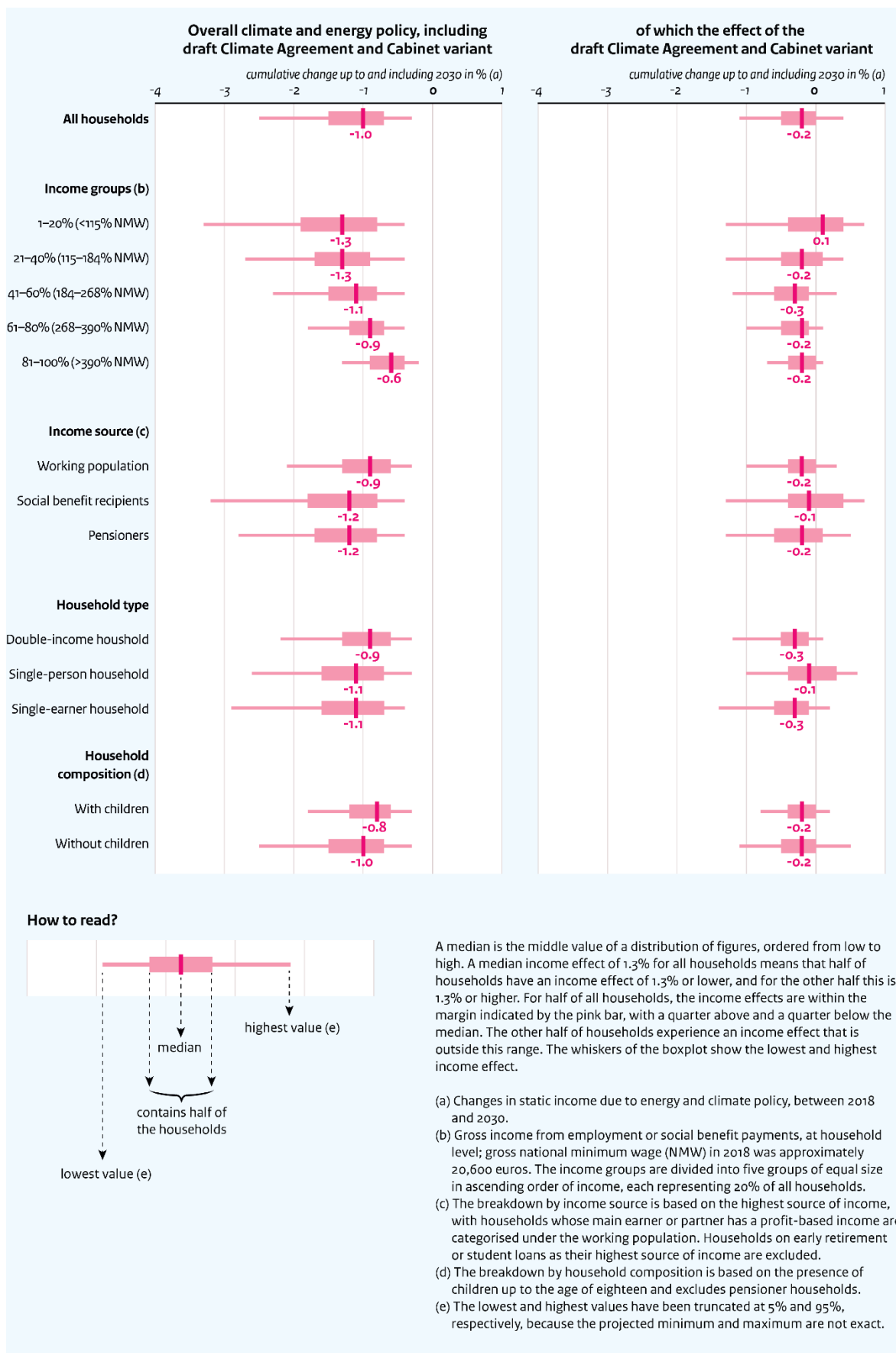


Figure 3.2 Income effects Cabinet variant 1, up to and including 2030, with delayed impact (provisional, without policies abroad)

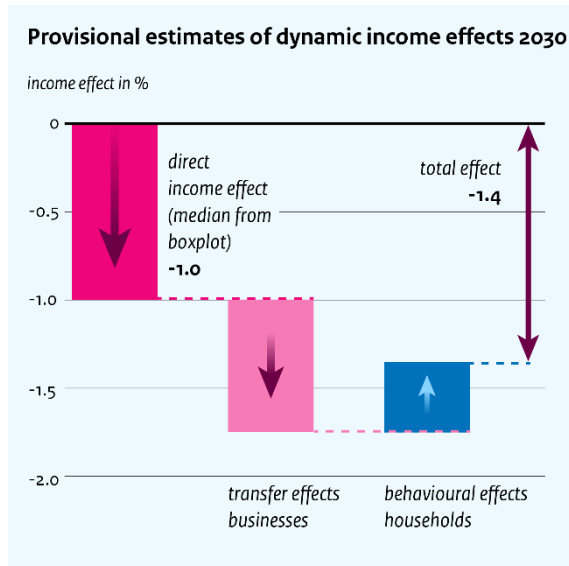
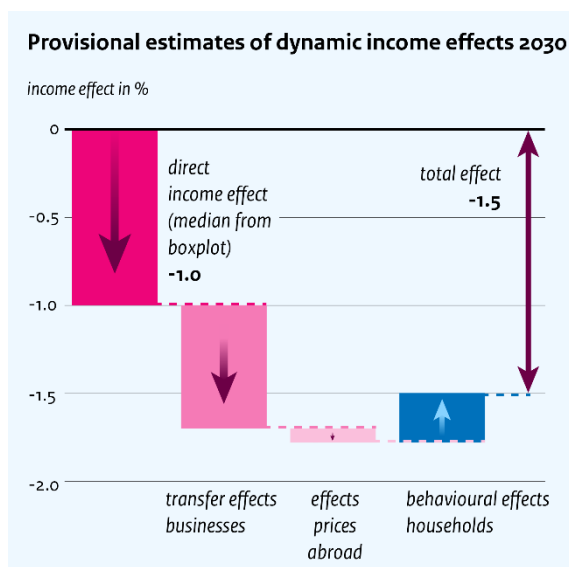


Figure 3.3 Income effects Cabinet variant 2, up to and including 2030, with delayed impact (provisional, without policies abroad)



If climate and energy policy abroad is also taken into account, the changes in the Cabinet variants will have a slightly positive impact on the total effect of the overall climate and energy policy, including the draft Climate Agreement. Policies abroad affects both prices and human behaviour. In both Cabinet variants price and behavioural effects do not change in relation to overall climate and energy policy, including the draft Climate Agreement. The price effect remains equal to -0.1% and the behavioural effect remains 0.2%. On balance, this will lead to a total impact of -1.5% for variant 1 and -1.6% for variant 2, by 2030. This represents a slight improvement, compared to overall climate and energy policy, including the draft Climate Agreement (-1.7% by 2030).

Figure 3.4 Income effects Cabinet variant 1, up to and including 2030, with delayed impact, both in the Netherlands and abroad (provisional)

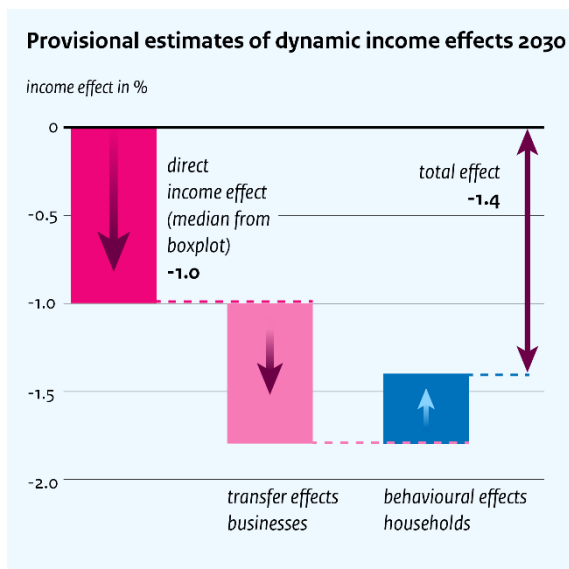
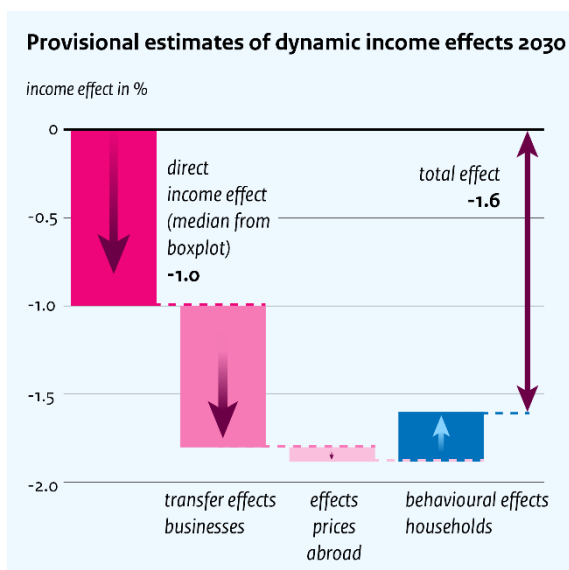


Figure 3.5 Income effects Cabinet variant 2, up to and including 2030, with delayed impact, both in the Netherlands and abroad (provisional)



Appendix

An overview is provided below of the evaluated measures from the Cabinet variants, as well as their impact on public finances. The amounts are ex ante and concern deviations from the baseline scenario.¹³

Cabinet proposal carbon tax variant 1

- The Cabinet proposes to increase spending on subsidies to businesses for sustainability activities, by 2021. In 2030, this will not lead to a spending increase (dCACv1_106).

Table A.1 Cabinet proposal carbon tax variant 1: expenditure mutations compared to the baseline scenario (ex ante, billion euros, 2018 price level)

Number	Measure (EMU-related)	2021	2025	2030
dCACv1_106	Increase spending on sustainability subsidies for businesses	NA	NA	0.000
Total		NA	NA	0.000
+ : improvement of the balance sheet				
NB dCACv = draft Climate Agreement and Cabinet variant				

- The Cabinet proposes to increase the reduction in energy tax by 120 euros in 2020, after which the increase will rise to 136 euros by 2030. This represents a 1.1 billion euro reduction in the financial burden for households. (dCACv1_101_a)
- The Cabinet proposes to increase the reduction in energy tax by 120 euros in 2020, after which the increase will rise to 136 euros by 2030. This represents a 0.1 billion euro reduction in the financial burden for businesses. (dCACv1_101_b)
- The Cabinet proposes to gradually reduce the energy tax on electricity each year, from 2021 onwards, up to a total of 2.3 euro cents per kWh, by 2028. This represents a reduction in the financial burden for households, increasing to up to 0.4 billion euros, by 2030. (dCACv1_102_a)
- The Cabinet proposes to gradually reduce the energy tax on electricity, each year, from 2021 onwards, up to a total of 2.3 cents per kWh, by 2028. This represents a reduction in the financial burden for businesses, increasing to up to 0.1 billion euros, by 2030. (dCACv1_102_b)
- The Cabinet proposes to increase the energy tax on natural gas by 4 euro cents per m³, in 2020, followed by an annual increase to up to a total of 10 euro cents per m³, by 2026. This represents an increase in the financial burden for households to up to 0.7 billion euros, by 2030. (dCACv1_103_a)
- The Cabinet proposes to increase the energy tax on natural gas by 4 euro cents per m³, in 2020, followed by an annual increase to up to a total of 10 euro cents per m³, by 2026. This represents an increase in the financial burden for businesses to 0.3 billion euros, by 2030. (dCACv1_103_b)
- The Cabinet proposes to change the tariffs for Sustainable Energy Storage (ODE) tax, from 2020 onwards, for both natural gas and electricity, in virtually all tax brackets. The shift is characterised by a relative increase in the tariffs in the higher tax brackets as well as on natural gas consumption and by a relative decrease in the first bracket and on electricity consumption. This represents a limited reduction in the financial burden on households, by 2030. (dCACv1_104_a)

¹³ See Appedix B in CPB (2019), Evaluation of the draft Climate Agreement, CPB Communication, 13 March 2019 ([link](#)).

- The Cabinet proposes to change the tariffs for Sustainable Energy Storage (ODE) tax, from 2020 onwards, for both natural gas and electricity, in virtually all tax brackets. The shift is characterised by a relative increase in the tariffs in the higher tax brackets and on natural gas consumption, and by a relative decrease in the first bracket and on electricity consumption. This represents an increase of 0.5 billion euros in the financial burden on businesses, by 2030. (dCACv1_104_b)
- The Cabinet proposes to introduce a carbon tax (designed as a minimum price in relation to the EU ETS), from 2021 onwards, for businesses that fall under the EU Emissions Trading System (EU ETS), for waste incineration installations and caprolactam-producing businesses. There is a decreasing tax-free rate, above which the tariff per tonne of CO₂ will be 8 euros in 2021 and increasing to 84 euros by 2030. Any emission allowance under the tax-free rate will be registered by the Dutch Emissions Authority and can be transferred from one company to another. The tax will increase the financial burden on businesses by 0 billion euros, by 2030. The tax will lead to business investments in emission reductions, resulting in non-EMU-related costs, see dCACv1_107. (dCACv1_105)

Non-EMU-related financial burden

- The implementation of the carbon tax will lead to substantial business investments in emission reductions. This represents an increase in the non-EMU-related financial burden on businesses of 0.2 billion euros by 2030. (dCACv1_107)
- The Cabinet proposal will require additional power grids, the costs of which will be incorporated in the grid tariffs. This will lead to a limited non-EMU-related increase in the financial burden on households, by 2030. (dCACv1_108_a)
- The Cabinet proposal will require additional power grids, the costs of which will be incorporated in the grid tariffs. This will lead to an increase in the non-EMU-related financial burden on businesses of 0.1 billion euros, by 2030. (dCACv1_108_b)

Table A.2 Cabinet proposal carbon tax variant 1: financial burden mutations, compared to the baseline scenario (ex ante, billion euros, 2018 price level)

Number	Measure (EMU-related)	2021	2025	2030
dCACv1_101_a	Increase in energy tax reductions (households)	-0.922	-1.023	-1.056
dCACv1_101_b	Increase in energy tax reductions (businesses)	-0.080	-0.089	-0.092
dCACv1_102_a	Decrease in energy tax on electricity (households)	-0.100	-0.395	-0.449
dCACv1_102_b	Decrease in energy tax on electricity (businesses)	-0.041	-0.126	-0.141
dCACv1_103_a	Increase in energy tax on natural gas (households)	0.378	0.649	0.693
dCACv1_103_b	Increase in energy tax on natural gas (businesses)	0.173	0.297	0.318
dCACv1_104_a	Shift in ODE tariffs (households)	0.001	-0.008	-0.014
dCACv1_104_b	Shift in ODE tariffs (businesses)	0.410	0.461	0.452
dCACv1_105	Implementation of carbon tax	NA	NA	0.000
Total		-0.181+NA	-0.234+NA	-0.289

Measure (non-EMU-related)				
dCACv1_107	Business investments in emission reduction	NA	NA	0.190
dCACv1_108_a	Costs of additional power grids (households)	0.001	0.011	0.029
dCACv1_108_b	Costs of additional power grids (businesses)	0.002	0.021	0.058
Total		0.003+NA	0.032+NA	0.277
+ : increase in financial burden				

Cabinet proposal carbon tax variant 2

- The Cabinet proposes to increase spending on sustainability subsidies for businesses by 2021. This represents a spending increase of 0.2 billion euros in 2030. (dCACv2_106)

Table A.3 Cabinet proposal carbon tax variant 2: expenditure mutations, compared to the baseline scenario (ex ante, billion euros, 2018 price level)

Number	Measure (EMU-related)	2021	2025	2030
dCACv2_106	Increase in spending on sustainability subsidies for businesses	-0.256+NA	-0.222+NA	-0.179
Total		-0.256+NA	-0.222+NA	-0.179
+: improvement of the balance sheet				

- The Cabinet proposes to increase the reduction in energy tax by 120 euros in 2020, after which the increase will rise to 136 euros by 2030. This represents a 1.1 billion euro reduction in the financial burden on households. (dCACv2_101_a)
- The Cabinet proposes to increase the reduction in energy tax by 120 euros in 2020, after which the increase will rise to 136 euros by 2030. This represents a 0.1 billion euro reduction in the financial burden on businesses. (dCACv2_101_b)
- The Cabinet proposes to gradually reduce the energy tax on electricity each year, by a total of 2.3 euro cents per kWh, starting in 2021 through to 2028. This represents a reduction in the financial burden on households, to 0.4 billion euros by 2030. (dCACv2_102_a)
- The Cabinet proposes to gradually reduce the energy tax on electricity each year, by a total of 2.3 euro cents per kWh, starting in 2021 through to 2028. This represents a reduction in the financial burden on businesses, to 0.1 billion euros by 2030. (dCACv2_102_b)
- The Cabinet proposes to increase the energy tax on natural gas by 4 euro cents per m³, in 2020, followed by an annual increase of up to a total of 10 euro cents per m³, by 2026. This represents an increase in the financial burden on households, to up to 0.7 billion euros by 2030. (dCACv2_103_a)
- The Cabinet proposes to increase the energy tax on natural gas by 4 euro cents per m³ in 2020, followed by an annual increase of up to a total of 10 euro cents per m³, by 2026. This represents an increase in the financial burden on businesses, to up to 0.3 billion euros by 2030. (dCACv2_103_b)
- The Cabinet proposes to change the tariffs for Sustainable Energy Storage (ODE) tax, from 2020 onwards, for both natural gas and electricity, in virtually all tax brackets. The shift is characterised by a relative increase in the tariffs in the higher tax brackets and on natural gas consumption and by a relative

reduction in the first bracket and on electricity consumption. This represents a limited reduction in the financial burden on households, by 2030. (dCACv2_104_a)

- The Cabinet proposes to change the tariffs for Sustainable Energy Storage (ODE)tax, from 2020 onwards, for both natural gas and electricity, in virtually all tax brackets. The shift is characterised by a relative increase in the tariffs in the higher tax brackets and on natural gas consumption and by a relative decrease in the first bracket and on electricity consumption. This represents an increase of 0.5 billion euros in the financial burden on businesses, by 2030. (dCACv2_104_b)
- The Cabinet proposes to introduce a carbon tax (designed as a minimum price in relation to the EU ETS) from 2021 onwards, for businesses that fall under the EU Emissions Trading System (EU ETS), for waste incineration installations and for caprolactam-producing businesses. There are two tax brackets: the first bracket with a flat rate of 5 euros for each tonne of CO₂ emitted, and a higher tariff of 89 euros in 2030 for emissions above the bracket limit. Any emission allowance left over below the bracket limit will be registered by the Dutch Emissions Authority and can be transferred from one company to another. The tax will increase the financial burden on businesses by 0.2 billion euros, by 2030. The tax will also lead to business investments in emission reduction, resulting in non-EMU-related costs, see dCACv2_107. (dCACv2_105)

Non-EMU-related financial burden

- The introduction of the carbon tax leads to business investments in emission reduction. This is an increase in the non-EMU-related financial burden on businesses of 0.2 billion euros in 2030. (dCACv2_107)
- The Cabinet proposal will require additional power grids, the costs of which will be incorporated in the grid tariffs. This will lead to a limited increase in the non-EMU-related financial burden on households in 2030. (dCACv2_108_a)
- The Cabinet proposal will require additional power grids, the costs of which will be incorporated in the grid tariffs. This will lead to an increase in the non-EMU-related financial burden on businesses of 0.1 billion euros in 2030. (dCACv2_108_b)

Table A.4 Cabinet proposal carbon tax variant 2: financial burden mutations, compared to the baseline scenario (ex ante, billion euros, 2018 price level)

Number	Measure (EMU-related)	2021	2025	2030
dCACv2_101_a	Increase in energy tax reductions (households)	-0.922	-1.023	-1.056
dCACv2_101_b	Increase in energy tax reductions (businesses)	-0.080	-0.089	-0.092
dCACv2_102_a	Decrease in energy tax on electricity (households)	-0.100	-0.395	-0.449
dCACv2_102_b	Decrease in energy tax on electricity (businesses)	-0.041	-0.126	-0.141
dCACv2_103_a	Increase in energy tax on natural gas (households)	0.378	0.649	0.693
dCACv2_103_b	Increase in energy tax on natural gas (businesses)	0.173	0.297	0.318
dCACv2_104_a	Shift in ODE tariffs (households)	0.001	-0.008	-0.014
dCACv2_104_b	Shift in ODE tariffs (businesses)	0.410	0.461	0.452
dCACv2_105	Implementation of carbon tax	0.256+NA	0.222+NA	0.179
Total		0.075+NA	-0.012+NA	-0.110
	Measure (non-EMU-related)			
dCACv2_107	Business investments in emission reduction	NA	NA	0.190
dCACv2_108_a	Costs additional power grids (households)	0.001	0.011	0.029
dCACv2_108_b	Costs additional power grids (businesses)	0.002	0.021	0.058
Total		0.003+NA	0.032+NA	0.277
<i>+ is increase in financial burden</i>				