

Status Outlook 2021

Denmark's national and global
climate efforts

English summary

1. Introduction, conclusions and recommendations

The Danish Climate Act of June 2020 stipulates that the Danish Council on Climate Change (DCCC) is to make recommendations for and provide a status update on the government's climate action efforts on an annual basis. An important part of the DCCC status update is an assessment of whether climate action efforts in the form of adopted instruments and other climate policy initiatives demonstrate the likelihood that the Danish 70-percent target in 2030 will be met. No single criterion or measure can provide a definitive answer to this question. Therefore, the DCCC assessment is based on overall considerations informed by a systematic review of all climate action efforts and of any remaining need for additional policy measures to meet the target of reducing greenhouse gas emissions, taking into account that we are only nine years from 2030. Based on the assessment of the government's climate efforts, the DCCC makes recommendations on initiatives that may make significant contributions in bringing Denmark closer to meeting the 70-percent target. The recommendations derive from the analyses of climate-policy-related issues published regularly by the DCCC. In addition to the 70-percent target, Denmark as an EU Member State has a number of climate and energy obligations that the DCCC also provides a status update for. The international aspect of climate policy is generally strong in the new Danish Climate Act, and in accordance with the Act, the Danish government has formulated a global climate strategy, which the DCCC comments on in this report.

Main conclusions and recommendations of the report

- In the assessment of the DCCC, the government's climate initiatives and measures do not demonstrate the likelihood that the Climate Act's 70-percent target for 2030 will be met. Consequently, new initiatives are needed.
- Since June 2020, the parties of the Danish parliament have reached a number of agreements that will bring Denmark closer to reaching the target. The DCCC finds that, in combination, the agreements will meet around a third of the approximate gap in 2030 of 20 million tonnes CO₂e estimated in the latest baseline projection from the Danish Energy Agency from June 2020. The agreements will lead to a reduction in 2030 of around 54 pct. as compared with 1990.
- It remains unclear how the government intends to meet the remaining approximately two thirds of the required reductions. This is critical, because time is short in view of the significant challenge ahead, and because the government largely expects to achieve the target with new and untested technologies.
- Therefore, it is crucial that a clear strategy with time schedules is quickly laid out, including processes and milestones for the development and implementation of technologies and initiatives, which in combination ensure that the expected reductions can be attained in 2030. Based on this, the DCCC recommends:
 - A concrete roadmap including all areas of climate action until 2030
 - A national strategy for CO₂ capture and storage as an important element in the roadmap
- In addition, in the coming years, the government and the Danish Parliament should adopt concrete measures that ensure further reductions of emissions in 2030. This also includes areas where political agreements have been reached in 2020. In this report, the DCCC highlights in particular recommendations for the instruments set out below, which should be implemented as soon as possible to bring Denmark closer to reaching the 70-percent target:
 - A gradually increasing, uniform and significant tax on all Danish greenhouse gas emissions
 - Initiatives for accelerated rewetting of peat soils in the agricultural sector
 - A higher price on greenhouse gases in socio-economic calculations, reflecting the 70-percent target
- Denmark is close to meeting its current EU energy and climate obligations as a result of the agreements reached in the past year. However, further efforts are needed in order to reach the obligation in the sectors not included in the EU Emissions Trading Scheme (ETS) for the period until 2030. But it will most likely be met, if Denmark achieves the 70-percent target. However, as the EU is likely to raise its total reduction target for 2030 from 40 to at least 55 percent, Denmark may well become subject to stricter obligations.
- The government's first global climate strategy corresponds well with the intentions of the Danish Climate Act. However, more information and better coherence between strategy and reporting of the effects of the global climate action is needed.

1.1 A new Climate Act and new tasks for the DCCC

Denmark has a new Climate Act with specific climate targets

In June 2020, Denmark adopted a new Climate Act that replaced the previous Climate Act of 2014. The new Climate Act was passed by a broad majority of the parties in the Danish Parliament. The main purpose of the law is to set a reduction target for Danish greenhouse gas emissions and to establish an institutional framework for the achievement and further development of the targets.

As a new measure, the Climate Act mandates the setting out of national climate targets that the government is obliged to achieve. The preamble of the Act states that, in 2030, Denmark must have reduced greenhouse gas emission by 70 percent compared with the level in 1990, and that Denmark must be a climate-neutral society by

2050 at the latest. In a broad international perspective the Danish targets are ambitious, but they cannot be said to be overly ambitious in relation to the climate objectives of the Paris Agreement. The Danish targets only just suffice if Denmark is to claim it can deliver its population-weighted reduction contribution to keep the global temperature rise within 1.5 degrees.¹

The targets for 2030 and 2050 are to be accompanied by further targets. As part of the political agreement on the new Climate Act, it was agreed that an indicative target for 2025 must be determined after further negotiations. At the time of writing, these negotiations have not yet been concluded. According to the Act, a target for 2035 must be decided in 2025, and similarly new forward-looking climate targets are to be decided on an ongoing basis by the same process, being adopted every fifth year with a ten-year horizon.

Apart from the focus on Denmark's national climate action, the Act emphasizes that Denmark must play a role as a global driving force in international climate politics. Therefore, the internationally oriented climate policies are also central in the Act. Specifically, the government is obliged to present a global climate strategy yearly, which must account for Denmark's global climate and energy collaboration, and for how the government's foreign, development and trade policies contribute to securing its role as a global driving force for climate action. Furthermore, the government must report annually on the effect of Denmark's internationally oriented climate actions.

The DCCC has also been assigned new tasks by the new Climate Act. The DCCC must continue to prepare analyses and provide recommendations on climate policies. In addition, the Council must also make an annual assessment of whether it has been demonstrated that the climate targets of the Climate Act are likely to be met. This is a fundamental element of this report. In addition, the DCCC has been given a number of assignments regarding, for example, commenting on the annual climate projections, the global reporting and the government's climate programme. Several of the Council's statutory duties from the old Climate Act, for example about contributing to the public debate, are also a part of the new Climate Act. Finally, the DCCC must be consulted when future climate targets are to be set.

This report gives the DCCC's broad perspective on the Danish climate efforts

This report constitutes the DCCC's status update, which according to the Climate Act must be published every year. A central element in this report is the assessment of whether climate action efforts demonstrate the likelihood that climate targets will be met, that is, whether sufficient measures have been put in place to meet the statutory targets. This assessment is about comparing efforts and targets based on the wording of the Climate Act. It should therefore not be seen as an awarding of marks on how much the government could reasonably have achieved politically and practically in one year; such judgements belong to the Danish Parliament. Rather, this is a technical and focused assessment of the likelihood of meeting Denmark's climate targets in accordance with the wording of the Climate Act.

The report is mainly focused on the 2030 target of a 70-percent reduction, while the target of climate neutrality by 2050 is addressed to a lesser extent only. This prioritization is due to the fact that the target in 2030 is the focal point in the political debate on climate change and governs the initiatives and agreements that have been reached during the last year. In addition, 2050 is still so far away that a reliable assessment is premature at present. Despite the somewhat longer time horizon, the 2050 target should nevertheless serve as an important benchmark for climate policies, also in the short term. The choices and investments undertaken before 2030 should also contribute to the further transition towards 2050.

In addition to the assessment of whether Denmark is on the right track to meet the climate targets, the report also includes recommendations for how future climate efforts can bring Denmark closer to reaching the targets. These recommendations are analytically founded in previous publications from the DCCC. New recommendations for climate policy will primarily be given in topical analyses published during the year, while this yearly status update summarizes the most important and current recommendations, if necessary in adjusted form. In the longer term, the annual status update will constitute a catalogue of the recommended climate policy measures of the DCCC.

Figure 1.1 illustrates how the DCCC's report is part of the annual climate policy cycle set out in the Climate Act. On the basis of the assessments and recommendations of the DCCC and the annual climate statistics and projections

of the Danish Energy Agency, the government must provide a status update on the climate targets and present its plans for its climate efforts in the Annual Climate Programme. In the Annual Climate Programme, the Minister of Climate, Energy and Utilities must provide an assessment of the likelihood that the national climate targets will be met, in a similar manner to the DCCC report. If this is deemed unlikely, the programme must be expanded with new initiatives that show the way towards meeting the targets. This is the so-called *duty to act*. Thereby the DCCC's status update at the beginning of the year also becomes a technical assessment of whether the duty to act must be applied. After possible adoption in the Danish Parliament, new initiatives can be included in the government's annual report on climate efforts, which is submitted to the Parliament at the end of the year. This provides the Danish Parliament with the opportunity to annually assess whether the government's initiatives are sufficient to comply with any possible duty to act.

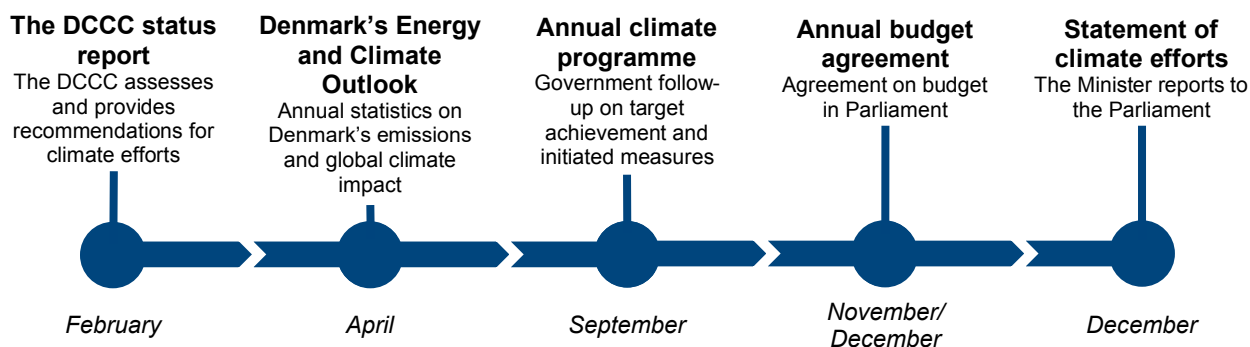


Figure 1.1 Annual climate policy cycle as stipulated by the Danish Climate Act

Remarks: In addition to the status report, the DCCC will publish analyses, assessments and recommendations during the year.

Source: Danish Ministry of Climate, Energy and Utilities *Climate action plan 2020*², and DCCC.

This report also looks beyond Denmark's borders. In connection with this, important elements are the developments and regulation in the EU, and how Denmark on the one hand is subject to climate and energy obligations imposed on us by our EU membership, and on the other hand how Denmark may influence developments in the rest of the EU. Finally, the DCCC also comments on the government's global climate strategy, which was released in connection with the climate programme in September 2020.

1.2 Assessment of the perspectives of meeting Denmark's climate targets

Assessing the likelihood of meeting the targets requires concrete roadmaps and adopted measures

The DCCC's assessment of the climate efforts is based on the latest annual Energy and Climate Outlook of the Danish Energy Agency from June 2020. These projections estimate emissions in 2030 based on the previously adopted policies and thus quantify the expected reduction gap that must be met through the adoption of further measures if the 70-percent target is to be met. When *reductions* are addressed in this report, they must therefore be viewed relative to the projections' estimates of the emissions in 2030. The climate efforts consist of elements described in the government's climate programme from September, the government's climate report from December and the political agreements regarding climate that have been adopted since the latest Energy and Climate Outlook. The DCCC can also take into account other relevant initiatives, but the Council has not deemed it relevant to include further initiatives this year.

There is no single definitive criterion or measure to assess whether the government's climate efforts demonstrate the likelihood that the climate targets will be met, and as such there is no definitive answer to the questions raised by the Danish Climate Act. For this reason, the DCCC review provides an overall assessment based on a detailed and systematic examination and transparent analysis of the climate efforts. Thus, the overall assessment cannot be put directly into a formula, but the DCCC bases the assessment on two main components in particular:

Klimarådet.

- The availability of a clear and concrete plan and process by the government for how it expects to meet the reduction gap, which also addresses the risk that the individual elements of the plan may not live up to their potential.
- A significant share of the reduction gap is covered by politically adopted measures, taking into account the risk that the measures do not deliver the expected contributions.

The first component addresses the fact that the government cannot expect that the climate target for 2030 will be achieved if there is no concrete roadmap that illustrates how the target is to be fulfilled. At the same time, it is essential that the plan does not entail larger risks than that altogether the 70-percent target will be met with a reasonable degree of certainty. The reason for the second component is that greater certainty of achieving the target is provided if a large share of the reduction gap is addressed with specific, adopted policies backed by a parliamentary majority. The closer we get to 2030, the larger this share should be. Overall, for the climate efforts to be deemed as being sufficient to demonstrate the likelihood that the 70-percent target will be met, they must make a contribution that can be deemed sufficient on the basis of an assessment of both components.

To a certain degree, the two components reflect the two tracks towards 2030 described in the DCCC report *Known paths and new tracks to a 70-percent reduction* from March 2020. The report presented an implementation track consisting of known measures and a development track based on strategic planning.

The timeline in figure 1.2 illustrates the rationale behind the two components. Before adoption of specific climate policy instruments, there is usually a *policy phase* with different stages, typically starting with the identification of a technical reduction potential for a specific area. This potential is specified over time through analyses, which form a strategy that proceeds into a specific political proposal, which is finally adopted in the same or revised form by the Danish Parliament. This phase can be short or long, depending on the measure, and sometimes some stages may be skipped. However, in order to assess the likelihood of being able to meet the target, it is crucial that most initiatives progress sufficiently far into the policy phase.

When a measure has been adopted, it must hereafter affect the many actors in society. This is called the *effect phase* in figure 1.2. Usually, it takes some time before the full effect sets in. There can be many reasons for this. Even after adoption, a great deal of preparatory work by authorities often remains before the measure can enter into force. A well-known example is the time lapse from planning of offshore wind farms to the point when bidding rounds can be launched. Many investments in large plants also take time to complete. Finally, the effect of a measure is typically accumulated over several years, as is the case with replacement of the conventional car fleet by electric cars, or influencing the behaviour of the population in a green direction. Overall, this implies that ensuring the likelihood of meeting Denmark's climate targets requires many political decisions in the early 2020's.

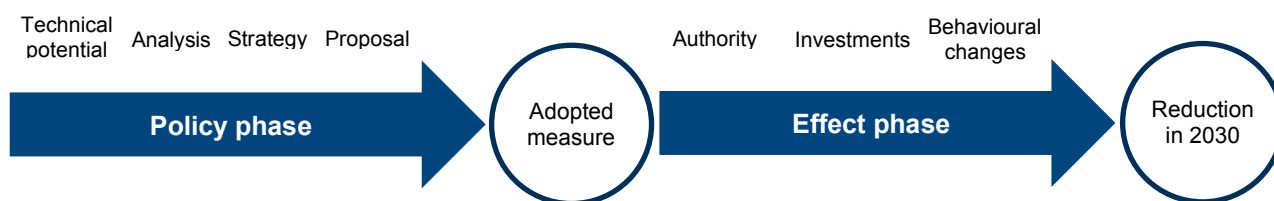


Figure 1.2 Generic timeline for new climate policy measures

Source: The DCCC.

The DCCC's assessment methodology takes into account reductions, concretization and risk

The DCCC has developed a methodical basis for analysing climate efforts, in order to make the described overall assessment appear as transparent and objective as possible, and to enable comparisons of the efforts from year to year. The DCCC intends to use the same method in future years, but the Council reserves the right to make ongoing adjustments. The method is based on the following elements:

- Assessment of the reduction gap in 2030 as indicated in the Energy and Climate Outlook

- Degree of concretization of initiatives, by distinguishing between adopted measures, political proposals, strategies, analyses and technical reduction potentials
- Reduction effect in 2030 of the government's new initiatives and an assessment hereof
- Assessment of the risk that the reduction effects and potentials of the initiatives are not realized
- Supporting and other climate policy initiatives

Adopted agreements expected to cover a third of the reduction gap, but concretization of the rest remains

The DCCC's survey of the government's climate efforts is summarized in figure 1.3. The starting point is Denmark's Energy and Climate Outlook from June 2020, which estimates that Denmark will emit approximately 43 million tonnes CO₂e in 2030 without new policies. This is marked with the grey bar in figure 1.3 below. This can be translated to a reduction of the greenhouse gas emissions of 44 percent as compared with 1990. This leaves a total reduction gap to meet the target of 70 percent in 2030 of approximately 20 million tonnes CO₂e. Based on this, figure 1.3 illustrates the expected reduction effects of the climate policy agreements as well as other initiatives, for example the technical reduction potentials presented in the government's climate programme, which were introduced after the 2020 projections. The reductions are shown with downward, coloured bars in the figure. In general terms, the DCCC has used the government's own estimates of reduction effects and technical reduction potentials, unless the Council has deemed it necessary to adjust these. The figure also indicates when the government operates with both a high and a low potential assessment. In those cases, the extra potential in the high assessment is marked separately with a dashed box.

Emission reductions in figure 1.3 are grouped according to how specific each individual initiative is at present, on a scale from A to E. The scale includes the different steps of the policy phase in figure 1.2. The letter 'A' means that the Danish Parliament has adopted the concrete measure, 'B' is used when the government has presented a proposal that has not yet been adopted, 'C' indicates a government strategy on a specific area with an indicated reduction effect, 'D' denotes an analysis, which often precedes an actual strategy. Finally, 'E' indicates that the government has identified a technical reduction potential without indicating how it expects to realize this potential. In figure 1.3, the reductions are illustrated with a colour scale from red to yellow to green to symbolize the progress in the policy phase, with green indicating the most concrete stage.

Finally, the reduction effect of each policy initiative at each stage of concretization is categorised according to a risk assessment. This reflects the DCCC's assessment of the likelihood that the indicated reduction can be realized before 2030. For example, there can be a high risk if the reduction estimates are based on immature technologies, or if it remains uncertain whether the incentives in an initiative are strong enough.

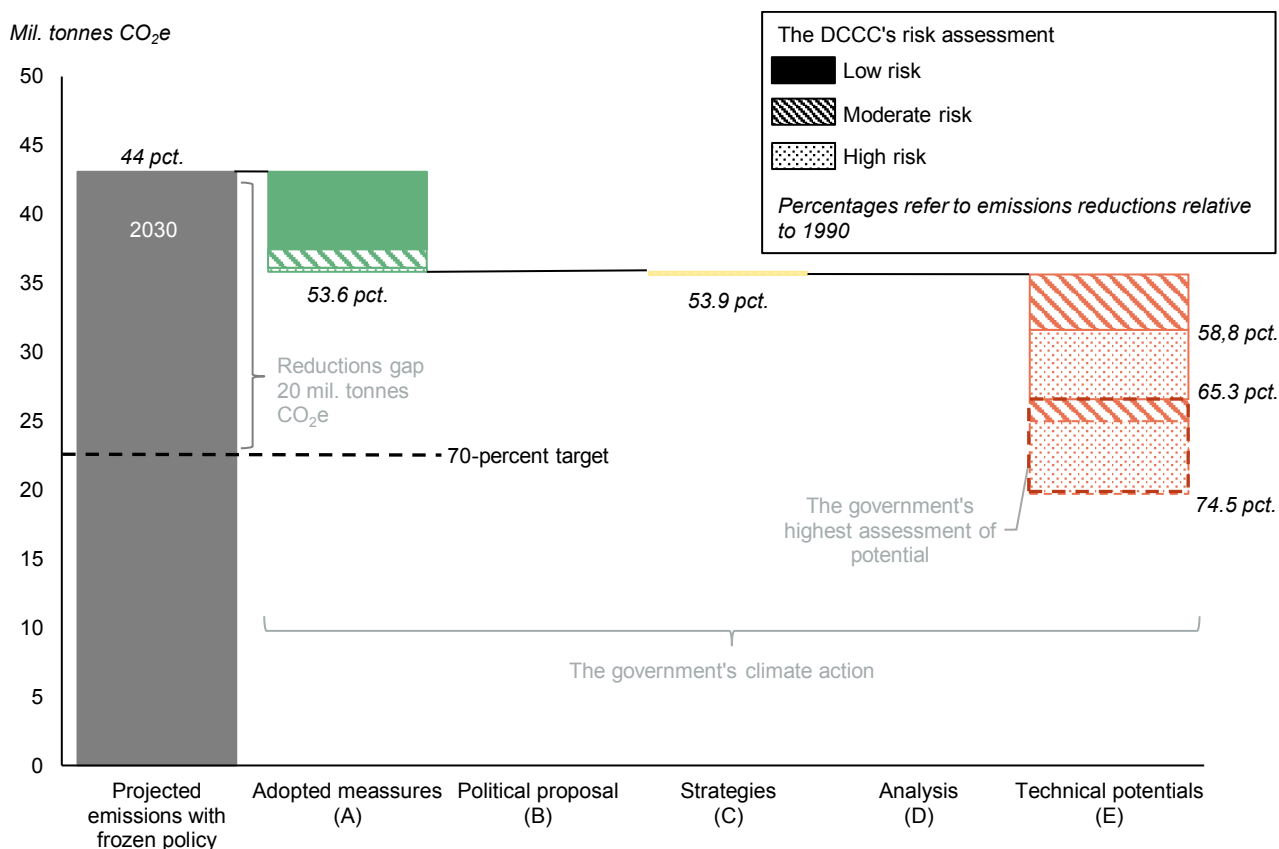


Figure 1.3 Assessment of the government's initiatives in relation to reduction effect, stage of concretization and risk

Remark 1: The dashed box in the figure indicates the DCCC's highest assessment of potential related to the technical reduction potential reported by the government, e.g. the last 5 million tonnes for CO₂ capture and storage or utilization (CCS/CCU), where the government has indicated a reduction potential of between 4 and 9 million tonnes in 2030.

Remark 2: The DCCC has corrected for overlap between initiatives.

Source: The DCCC.

Concretization level A in figure 1.3 indicates that at the time of writing the Danish Parliament had adopted initiatives that - according to the DCCC's expectation - will reduce the emissions in 2030 by 7.2 million tonnes CO₂e compared with the level of the baseline projection. This is equivalent to approximately one third of the reduction gap of 20 million tonnes identified in the latest Energy and Climate Outlook. This increases the reduction percentage compared with 1990 to almost 54 pct. Among other factors, a sectoral agreement regarding energy and industry with an expected reduction effect in 2030 of 3.4 million tonnes CO₂e was adopted in the summer of 2020 including an expected reduction of 0.7 million tonnes CO₂e in the waste sector. The 7.2 million tonnes is slightly higher than the government's own estimate in its annual climate programme. This is mainly due to the fact that the DCCC has calculated higher reduction effects from the subsidy schemes for biogas.

Only few measures are categorised at concretization level C. Together they result in a limited reduction effect of an estimated 0.2 million tonnes CO₂e. This reduction is marked with yellow in figure 1.3 and partly stems from the government's strategy in the transport sector, which includes an ambition to introduce kilometre-based taxes for trucks, but a specific design and magnitude of the level of taxation has not yet been presented. Another part stems from the establishment of energy islands, which in the assessment of the DCCC is still at the strategy stage, as many details and decisions remain.

In addition to the instruments and strategies mentioned above, the government has identified a technical reduction potential which possibly can bridge the remaining reduction gap. This potential is marked in red in

figure 1.3 and represents the lowest concretization level E. This level implies that a plan has yet to be made for how this potential is to be realized. At the same time, a large share of the total potential carries a high level of risk, which for example is the case for the potential related to CO₂ capture and storage or utilization (CCS/CCU). Here the ambition is to realize a very large reduction potential within a few years by employing relatively untested technologies. The DCCC deems this to be potentially challenging.

At present, there is thus significant uncertainty about how the remaining approximately 13 million tonnes CO₂e are to be reduced. This is underlined by the fact that the government in its own climate programme indicates both a low and a high assessment of the potential of several new technologies, including CCS. Figure 1.3 shows that the 70-percent target can only be met if the government's high estimates on reduction potential are realized. If only the low estimates of the government are realized, the reduction in 2030 will be approximately 65 percent relative to 1990 .

In addition to the reduction effects in figure 1.3, the government has made a list of supporting and additional initiatives in 2020, for which it is currently not possible to quantify an actual reduction effect. This is the case for initiatives such as research and development, sustainable construction and green public procurement. These initiatives are essential contributions to the transition of society and to the adoption of new habits, but they do not significantly affect the overall assessment of the climate efforts shown in figure 1.3.

The climate efforts do not demonstrate the likelihood that the target in 2030 will be achieved

Based on a thorough survey and analysis of both adopted climate policies as well as the government's other climate efforts, as summarized in figure 1.3, the DCCC does currently not deem it likely that the 2030 target will be reached. This represents an overall assessment of the climate action efforts up to the present seen in relation to the outstanding greenhouse gas reduction gap and seen in the light of the fact that there are now nine years until 2030.

The main reason behind the DCCC's assessment that it is not demonstrated that 2030 target is likely to be met is the non-fulfilment of the first component of the Council's overall assessment. The DCCC thus assesses that there is no sufficiently concrete plan and process for how the government expects to meet the remaining reduction gap. The government's climate programme covers almost two thirds of the reduction gap with initiatives for which only a technical reduction potential has been identified. The government would only achieve more than 70-percent reductions if its highest estimates of this technical potential is used as the basis of assessment. As illustrated in figure 1.3, there is a need 'to move' reductions towards left on the concretization scale, from red to yellow to green. At the same time, much of the identified potential depends on completely new and highly technically uncertain technologies, which only increases the need to prepare a more specific plan for how the technical potential is to be realized. Furthermore, the already adopted policies also include elements of risk. In conclusion, at present there is considerable uncertainty about the pathway that the government wishes Denmark to follow towards the 70-percent target in 2030.

The DCCC recognizes that during 2020 the government has passed measures equivalent to around one third of the reduction need in 2030. This constitutes an important first step, but from there it is not possible to conclude that we have now managed one third of the challenge. The reduction measures that have been adopted can in some regards be characterized as low-hanging fruits, all of which more or less are associated with low to moderate risk. Hence, there is hardly any doubt that it will become increasingly more difficult to find new tonnes for the pool of reductions. This is exactly why it is important that the government quickly establishes more concrete plans and processes on how the remaining reduction gap is to be realized. Overall, the DCCC has assessed that the adopted measures with an effect of roughly one third of the reduction gap are not sufficient to balance the lack of specific plans and processes for meeting the remaining part of the reduction requirement that must be reached within the coming nine years.

To make it probable that 2030 target will be met the government and the Danish Parliament should adopt further measures over the next years that ensure significant additional emissions reductions in 2030. This also applies to the sectors for which political agreements have already been concluded in 2020, and in which the DCCC assesses there remains extra reduction potential with limited socio-economic costs. At the same time, it is equally important that the government as soon as possible presents strategies with time schedules, initiatives and expected types of

measures for the areas of reduction potential that are not yet ready for implementation of concrete policy measures. The DCCC provides recommendations for this in section 1.3.

Denmark is reasonably on track towards climate neutrality before 2050, if we meet the 2030 target

The 70-percent target in 2030 is an important steppingstone towards the Climate Act's objective of climate neutrality by 2050 at the latest. The 2030 target and subsequent targets every fifth year are to ensure that Denmark stays on track towards the long-term target. It is obviously too soon to make detailed plans for climate action all the way to 2050, and therefore the government's main climate policy focus on the 2030 target is reasonable at this stage. Accordingly, in this report the DCCC addresses the possibility of reaching the 2050 target by assessing the prospects of reaching the 2030 target. If we reach the 70-percent target in 2030 with emphasis on long-term climate efforts, we are most likely well on the way towards climate neutrality by 2050.

It is important, however, to keep in consideration that the last 30 percentage points towards 2050 will most likely be by far the most difficult to achieve. Even if Denmark succeeds in reaching the 70-percent target in 2030, the challenge of moving towards climate neutrality is still substantial. Our entire transport sector will have to be transitioned to using renewable energy through for example electrified road transport, we need to reduce the climate footprint of the agricultural sector markedly and we would have to start using new, immature and expensive technologies that can provide negative emissions as a counterweight to the emission sources that may still exist in 2050.

These challenges underline the fact that the long-term perspective should be given significant weight in the climate policy adopted to meet the target in 2030. This is also a guiding principle in the new Climate Act. At the same time, it is crucial to focus on a broad transformation of the whole of society. But this also implies that when assessing specific initiatives it may make sense to choose promising and future-proof solutions instead of alternatives that might be a little cheaper at present, but which do not work or are not cost-effective in the long term. Short-term investments in afforestation may for example make sense from a 2050 perspective, even though the reduction effect in 2030 is limited. Likewise, there may be a need to focus on initiatives for areas such as transformation of the car fleet, which would only have a significant effect after 2030.

The DCCC calls for a 2025 target

According to the political agreement behind the Climate Act, the parties of the Danish Parliament must adopt a reduction target for 2025.³ The intention is to strengthen climate action in the short term. The target is to be indicative, which means that the target must be specified as a range, in accordance with the explanatory notes to the Climate Act. In contrast to the stipulations for the 2030 target and subsequent climate targets, the explanatory notes do not stipulate that a duty to act is applied to the 2025 target.

The government initiated political negotiations regarding the 2025 target in December 2020, but no agreement has been reached at the time of writing. If the target is to affect the climate efforts in coming years and create the desired climate action in the short term, it is essential that the target is established very quickly. The DCCC thus calls for an agreement regarding a target in 2025 to be made as soon as possible.

In the negotiations, the government started by proposing a 2025 target of a 46-50 percent reduction compared with the level in 1990. The DCCC March 2020 report recommended a more ambitious target of 50-54 percent.⁴ The recommendation was based on the 2019 Annual Energy and Climate Outlook from the Danish Energy Agency. The lower limit of 50 percent constituted the DCCC's estimate of a reasonable level of reduction potential that could be achieved within five years. Two new factors since the publication of the DCCC report in 2020 must be kept in mind. On the one hand, the projection from June 2020 implies that the previously estimated reduction potential would only give a 48-percent reduction in 2025, which is in part due to the projection having adjusted emissions from carbon-rich peat soils upward. On the other hand, new reduction potential has been included that was not part of the DCCC report in March 2020. This potential includes the possibility of re-wetting more peat soils, faster implementation of CO₂ capture and storage as well as the prospect of more biogas than previously expected. Overall, the DCCC still considers a target of 50 percent to be achievable at a reasonable cost, taking into account the challenge of having to meet the 70 percent target 5 years later. The DCCC notes, however, that the more time that passes without extra reduction efforts, the harder it will become to meet the 2025 target of 50-54 percent proposed by the DCCC.

1.3 Recommendations on the future climate efforts

The DCCC contributes with recommendations for future climate efforts

It is crucial that climate efforts are expanded and prioritized in the coming years if Denmark is to meet the 70-percent target. The DCCC's assessment that current climate efforts 'do not demonstrate the likelihood' that the target is reached underlines this points. This calls for new ideas and proposals on climate policy from all relevant actors and not least from the DCCC, as the government's official adviser in this field.

Throughout its six-year lifespan, the DCCC has continuously provided climate policy recommendations. Some recommendations have been followed, some are no longer relevant, while others should still be pursued in the future climate efforts. In a background note for this report, all of the DCCC's current recommendations are listed, as a precursor to the catalogue of measures that the DCCC must build over time in accordance with the Climate Act.⁵

The Climate Act emphasizes that Denmark's climate efforts must be pursued in a manner that takes a list of guiding principles into account, and that the DCCC's recommendations must address these principles. Consequently, this report also focuses on them. Twelve principles can be extracted from the Climate Act, which among other things address cost efficiency, sound public finances, social balance, competitiveness of Danish companies and the long-term green transition. In addition to this, the DCCC emphasizes the need for a systemic approach that can ensure that climate policy both changes behavioural patterns in a green direction, and prepares the ground for new technological tools to be used. The systemic approach is also intended to direct attention towards the interactions between the guiding principles and between the different sectors of society, in order to pave the way for a climate neutral society by 2050 at the latest.

The DCCC highlights five recommendations for central initiatives and measures

In order to bring climate efforts closer to making it probable that the 70 percent target will be met, in the following section the DCCC highlights five of its previous recommendations, all of which can to a high degree contribute effectively to reaching the target.

The DCCC points to the need for far better plans and processes on the way towards 2030. On that background, the DCCC recommends:

- **Specific roadmap towards 70 percent:** The government should strongly prioritize the planning and strategy work in the climate field towards 2030. This should be done in the form of an actual roadmap that can be developed through either the climate programme or the climate action plan. In their current shape, none of these two publications are adequate to ensure the necessary basis for a coordinated, well-thought-out and timely climate plan. The DCCC recommends that the roadmap details specific and coherent scenarios for the target achievement in 2030, and provides guidelines for the government's approach to measures. Further it could outline the expected process for the continued climate efforts, including time plans and milestones. The roadmap should contain both sectoral strategies, for example in agriculture and transport, and cross-sectoral elements, that ensure a holistic approach. Naturally, a roadmap for climate efforts is not in itself sufficient to ensure the target is achieved, but it will create the foundation for the government and the Danish Parliament to be able to adopt the necessary reduction measures in time.
- **National strategy for CCS:** Plans for deployment of CO₂ capture and storage (CCS) should form an important part of the overall roadmap. The government's plan envisages that a significant share of the reduction gap in 2030 can be filled by using CCS. The DCCC has also previously estimated that CCS is likely to play a significant role, though it should not delay the development of technologies and processes that actually eliminate greenhouse gas emissions. There are many barriers to overcome if CCS is to contribute on a large scale to reaching the target. It will take detailed strategic planning, if Denmark is to truly enter the CCS track prior to 2030, and this planning is urgent. The strategy must specify benchmarks for how much the technology is going to be used, and in relation to which CO₂ sources. A decision must be made regarding the placement of CO₂ storage facilities, and about future owners and operators. Legislation must be adapted in order to remove legal barriers, for example to storage. Economic

framework conditions must be established in order to create incentives to capture CO₂ and store it in the ground. In addition, the safety risks must be clarified, especially if the storage facilities are to be placed on land close to built-up areas. These issues are just some of the elements that a national CCS strategy should address as soon as possible.

Planning cannot stand alone. New measures that effectively ensure reductions no later than 2030 are also necessary. Below, the DCCC emphasizes three recommendations that can be implemented relatively quickly, and which should be central parts of climate efforts. The three recommended measures are also in line with many of the guiding principles of the Climate Act, for instance the principle of a cost-efficient climate policy, such that the climate target can be met at the lowest possible costs for society. Thus, the DCCC recommends:

- **General carbon tax:** A relatively high uniform carbon tax is a key pillar in a cost-efficient achievement of the 70-percent target. Such a tax would ensure significant reductions in industry, agriculture, transport, and heating of buildings. Today, the carbon tax per tonne of carbon differs greatly across sectors, and for some it is very low and even zero. With the agreement on a green tax reform in December 2020, the Danish Parliament decided that a uniform carbon tax will be a key measure in reaching the target, and therefore set up an expert group to prepare and recommend a model. The DCCC acknowledges that handling all the different elements of a uniform carbon tax is a complicated task, including not least designing measures to counteract potential carbon leakage due to such a tax. Nevertheless, the DCCC recommends that the broad outlines of a tax reform be presented already today. For instance, this should include the expected tax level in 2030 and how it will be phased in over the years leading up to 2030. In this way, there will be more clarity for firms and citizens who are going to invest and make decisions that may be affected by a tax in the coming years.
- **Accelerated rewetting of peat soils:** The CO₂ emissions from carbon rich peat soils correspond to one fifth of the reduction gap in 2030. From a socio-economic perspective, the costs related to rewetting are low. Therefore, this measure will be a significant and cost-efficient contribution to reaching the climate target. Furthermore, it is estimated that rewetting of soils will not increase carbon leakage. For these reasons, the DCCC recommends a significantly increased political focus on rewetting the soils. This recommendation stands even though in practice stopping agricultural production and rewetting of soil may lead to complications. Therefore, the DCCC has recommended a model in which rewetting is implemented in a coordinated manner, where practical barriers are addressed and relevant stakeholders and authorities are involved. In due time, the economic incentive may come from the general tax on greenhouse gas emissions, whereas in the shorter term it may be provided by an auction-based subsidy scheme.
- **Higher value of climate effects in socio-economic calculations:** Decisions in the public sector, for instance on new construction projects, are often based on socio-economic impact assessments. A technical assumption of the price of greenhouse gas emissions is often a part of these assessments. This price should include factors such as the cost to society of a project's potential contribution to increasing greenhouse gas emissions in Denmark, because an equivalent emissions reduction must be realized somewhere else in order to meet the 70-percent target. In October 2020, the Ministry of Finance issued a supplement to its guide on socio-economic calculations that required sensitivity calculations with different CO₂e prices to be performed. However, the DCCC assesses that the central CO₂e price is much too low, and this must be adjusted upwards.

1.4 Danish climate policy in an international context

Denmark meets its EU obligations for 2020, but the obligations for 2030 require new measures

The fulfilment of the Danish climate targets is realized under framework conditions that are largely decided externally. As a member of the EU, Denmark has taken on a number of climate and energy obligations as a part of the joint European climate action that sets obligations for other Member States too. These obligations may limit Denmark's options in pursuing its own climate targets. On the other hand, part of the efforts to meet the 70-percent target should be realized because of these EU commitments. If we meet our national target of a 70-percent reduction in 2030, we will most likely fulfil our EU commitments at the same time.

According to both the previous and current Climate Act, the DCCC has a statutory duty to assess Denmark's compliance with international obligations. The government also provides an assessment of this in its annual climate programme. However, the DCCC finds that not all international commitments have been mentioned in the climate programme. For instance, the climate programme from September 2020 includes no assessment of the obligation in the land-use, land-use change and forestry sector, nor of the energy saving obligation.

Currently, all Denmark's international climate obligations and commitments are set by the EU. Among other things, this is because the EU is party to the Paris Agreement on behalf of its Member States. Denmark has EU obligations and commitments for both 2020 and 2030. All the Danish obligations and commitments for 2020 appears to have been met, even though the final data have not been calculated as of yet. Table 1.1. shows the current assessment of Denmark's four obligations and commitments for the period toward 2030. Denmark's commitments in the table remain unchanged compared with the DCCC's latest status report, but will probably look different in the future. The background for this is that the EU's 2030 climate target will most likely be raised from a 40-percent to at least a 55-percent reduction in greenhouse gas emissions relative to 1990. When the comprehensive EU climate and energy regulations have been adjusted in line with the more ambitious EU target, the Danish obligations and commitments are likely to be tightened, all else being equal.

Table 1.1 Denmark's international climate and energy commitments for 2030

Commitment concerns	Commitment	Compliance
Greenhouse gas emissions in the non-ETS sector	39 pct. reduction from 2005 to 2030	●
Carbon pool in land and forest	The carbon pool balance must not worsen in the periods 2021-25 and 2026-2030	●
Share of renewable energy in the transport sector	Effectively 7 pct. in 2030, of which 3.5 pct. advanced biofuel	●
Energy savings	New yearly savings of 0.8 pct. of the average, final energy consumption in the period 2016-2018	●

Remark 1: Green = the commitment has been met or is expected to be met with adopted decisions. Yellow = the commitment can be met, but further measures are needed. Red = the commitment cannot be met.

Remark 2: The energy savings commitment in the transport sector for 2030 is 14 pct., but 7 percentage points are effectively optional and for this reason the effective target is 7 pct.

Source: The Danish Council on Climate Change.

The most extensive commitment in table 1.1 concerns the Danish emissions from what is called the non-ETS sector primarily including agriculture, transport, buildings and smaller industries. Complying with the obligation of reducing emissions by 39 percent relative to 2005 in principle requires a number of new measures. Yet, the DCCC expects that the obligation, as currently set, is likely to be met without special focus if Denmark achieves its 70-percent target. The reason is that we cannot really meet the 70-percent target without making a significant effort within the non-ETS sector. Based on this conclusion, the DCCC calls for more transparency on the reasoning behind the government's decision to cancel allowances from the EU Emissions Trading system (EU-ETS) in order

to meet the non-ETS obligation. Furthermore, the DCCC calls for an indication of how the government intends to use the ETS allowances cancelled in the EU framework, which will be transformed in the coming years.

The prospects of meeting the three other commitments in table 1.1. look equally promising. Projections including policies adopted for the period until 2030 indicate that the obligation for the carbon pool in land and forests will be met. Furthermore, the DCCC expects that the policies adopted suffice to provide the savings required in energy consumption to meet our obligations. The obligation concerning renewable energy in transport is close to being met, but a final clarification on how the rules in this field will be implemented is still lacking. For instance, it is still not clear if electro fuels can be calculated as a part of meeting the objectives. Overall, this suggests that Denmark does not have to make further great efforts to meet the current EU commitments for 2030, if we otherwise achieve our own national climate target in 2030.

The EU is moving towards a more ambitious climate policy – potentially with significant implications for Denmark

The Danish EU obligations are based on current EU regulations. However, the EU's climate policy is evolving in these years. Most significant is the fact that in December 2020 the European Council proposed to raise the European climate target from a 40-percent to at least a 55-percent reduction in 2030 relative to 1990. As mentioned above, this might imply that Denmark will be met with tighter obligations than today. However, it is as yet too early to say how the EU's more ambitious target will affect the EU regulations in detail and thus the Danish obligations.

The most substantial change in the regulation currently being discussed by the EU-Commission is the extension of the EU ETS to include all fossil energy consumption. The implication could be that emissions from transport and buildings will also be a part of the ETS. The general position of the government is to support the extension in the EU negotiations. The DCCC is also positive towards this change, which could lead to more cost-efficient climate efforts by creating one joint price signal across as many sectors as possible. If the allowance system is extended to more sectors, a much lower share of the Danish emissions will be regulated under separate national reduction commitments.

As regards sectors outside a future, enlarged ETS - primarily agriculture, land-use, land-use change and forestry - the EU Commission is considering establishing a separate land sector. This could potentially ensure a more uniform regulation of agriculture and of carbon storage across the EU with common EU requirements and measures. However, this is subject to a regulation of this sector based more on common European measures and without the present use of national targets which the Member States have to try to meet using their own measures.

The new global climate strategy is consistent with the Climate Act but there is room for improvement

The new Climate Act also emphasizes Denmark's efforts to reduce emissions outside the country's borders. The Danish climate efforts must be seen in an international context due to the global character of the climate challenge. Furthermore, the Climate Act emphasizes that Denmark must be a front-runner in international climate action. According to the Climate Act, Denmark has a historical responsibility to take the lead, for example by doing more than just reducing emissions within our own territory, and by contributing with global climate financing in accordance with the Paris Agreement. In this way, Denmark can affect emissions and climate policies in other countries with an active, globally focused climate policy. According to the Climate Act, the government must report on its global climate strategy, and the Danish Energy Agency must annually make a report of the international effects of Danish climate action.

Overall, the DCCC finds consistency between the ambitions in the Climate Act and the global strategy, which establishes the framework for how Denmark will contribute to reducing emissions outside our borders. However, the strategy should also be seen in the context of the forthcoming global reporting of the international effects of the Danish climate action. Due to the fact that this report will not be published until after the writing of the present report, the DCCC has insufficient basis to assess Denmark's global climate action this year.

Looking forward, the DCCC calls for a clear link between the global reporting and the global climate strategy. For this reason, it is positive that already in 2021 the government will look at how the effect of financing global climate investments can be incorporated into the global reporting. Furthermore, the link between strategy and reporting

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can be strengthened if future reporting also includes climate diplomacy, for example. In future years, the strategy could benefit from increased focus on possibilities for decreasing the Danish carbon footprint in foreign countries stemming from our consumption patterns, and on reducing emissions from international shipping and aviation.

The expected effects of the government's strategy are only described in very little detail in the strategy. The DCCC finds that a process of following up on the strategy is lacking. Hence, the DCCC recommends that a tool for following up on the global climate strategy be developed that describes specific efforts, the public funds devoted to these efforts and the expected effects and target for the total efforts. To create more clarity and credibility around the strategy, indicators can be set in a number of areas. This will make ongoing monitoring possible, which can afterwards become part of the global report. In the future, this could provide the basis for targeting efforts towards areas where the effect is largest - both in relation to reducing emissions and increasing efforts to adapt to climate change.

Notes

¹ Danish Council on Climate Change, *A framework for Danish Climate Policy*, 2019.

² Ministry of Climate, Energy and Utilities, *Climate Action Plan 2020*, 2020.

³ The government (Socialdemokratiet), Venstre, Dansk Folkeparti, Radikale Venstre, Socialistisk Folkeparti, Enhedslisten, Det Konservative Folkeparti og Alternative, *Agreement on the Climate Act of 6th December 2019*.

⁴ Danish Council on Climate Change, *Known paths and new tracks to 70 percent reduction*, 2020.

⁵ See background paper *Previous recommendations* on DCCC's web-site: www.klimaraadet.dk.

