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Report of the technical review of the first biennial report of the United States of America

Developed country Parties are requested, in accordance with decision 2/CP.17, to submit their first biennial report to the secretariat by 1 January 2014. This report presents the results of the technical review of the first biennial report of the United States of America conducted by an expert review team in accordance with the "Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention".

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I. Introduction and summary

A. Introduction

1. For the United States of America the Convention entered into force on 21 March 1994. Under the Convention, the United States made a commitment to reducing its greenhouse gas (GHG) emissions by in the range of 17 per cent by 2020 below the 2005 level.

2. This report covers the in-country technical review of the first biennial report (BR1)[1] of the United States, coordinated by the secretariat, in accordance with the "Guidelines for the technical review of information reported under the Convention related to GHG inventories, biennial reports and national communications by Parties included in Annex I to the Convention" (decision 23/CP.19).

3. The review took place from 24 February to 1 March 2014 in Washington, D.C., United States, and was conducted by the following team of nominated experts from the UNFCCC roster of experts: Mr. Marko Aunedi (Croatia), Ms. Ana Maria Danila (European Union), Mr. Qingxian Gao (China), Ms. Thelma Krug (Brazil) and Mr. Peer Stiansen (Norway). Ms. Krug and Mr. Stiansen were the lead reviewers. The review was coordinated by Ms. Inkar Kadyrzhanova and Ms. Katia Simeonova (secretariat).

4. During the review, the expert review team (ERT) reviewed each section of the BR1 and each common tabular format (CTF) table.

5. In accordance with decision 23/CP.19, a draft version of this report was communicated to the Government of the United States, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

B. Summary

6. The ERT conducted a technical review of the information reported in the BR1 of the United States according to the "UNFCCC biennial reporting guidelines for developed country Parties" (hereinafter referred to as the UNFCCC reporting guidelines on BRs).

7. During the review, the United States provided further relevant information, in particular the methodologies used for assessing the effects of the additional measures contained in the 2013 Climate Action Plan (CAP) and the methodologies used for preparing information on international climate finance for the BR1.[2]

1. Completeness and transparency of reporting

8. Gaps and issues related to the reported information identified by the ERT are presented in table 1 below.

[1] The biennial report submission comprises the text of the report and the common tabular format (CTF) tables. Both the text and the CTF tables have been subject to the technical review.

[2] The methodologies are available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/biennial_report_methodologies_appendix.pdf> and <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/biennial_report_international_climate_finance_methodologies.pdf>.

2. Timeliness

9. The BR1 was submitted on 1 January 2014, in line with the deadline of 1 January 2014 mandated by decision 2/CP.17. It was resubmitted on 9 January 2014. The CTF tables were submitted on 1 January 2014 and resubmitted on 17 and 20 March 2014.

3. Adherence to the reporting guidelines

10. The information reported by the United States in its BR1 is completely in adherence with the UNFCCC reporting guidelines on BRs as per decision 2/CP.17 (see table 1).

Table 1
Summary of completeness and transparency issues of reported information in the first biennial report of the United States of America[a]

Sections of the biennial report	*Completeness*	*Transparency*	*Reference to paragraphs*
Greenhouse gas emissions and trends	Complete	Transparent	
Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target	Complete	Transparent	
Progress in achievement of target	Complete	Mostly transparent	23
Projections	Complete	Transparent	
Provision of support to developing country Parties	Mostly complete	Mostly transparent	42 and 58

[a] A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chapter III below (conclusions).

II. Technical review of the reported information

A. All greenhouse gas emissions and removals related to the quantified economy-wide emission reduction target

11. The United States has provided a summary of information on GHG emission trends for the period 1990–2011 in both the text of the BR1 and in CTF table 1. This information is consistent with the 2013 national GHG inventory submission.

12. Total GHG emissions[3] excluding emissions and removals from land use, land-use change and forestry (LULUCF) increased by 8.0 per cent between the base year (1990) and 2011 in the United States, whereas total GHG emissions including net emissions or removals from LULUCF increased by 7.6 per cent over the same period. The ERT noted that after a peak in 2005, the upward trend in emissions changed to a downward trend, and total GHG emissions including LULUCF in 2011 reached a level 6.5 per cent below the 2005 level. In its BR1, the United States reported that the economic downturn starting in 2008, the extensive exploration of the vast resources of shale gas, significant fuel switching from coal to natural gas used for power generation, the doubling of the share of electricity generation from renewable energy, energy prices as well as a wide range of policies and measures (PaMs) addressing energy efficiency improvements in vehicles, appliances and equipment were the main factors driving the emissions decrease.

[3] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of carbon dioxide equivalent excluding land use, land-use change and forestry, unless otherwise specified.

13. By sector, the most significant emission decreases were observed in electricity generation (by 10 per cent), attributed by the United States in its sixth national communication (NC6) to the fuel switch from coal to natural gas and the increase in power production from renewable energy, and in the industrial sector (by 11.2 per cent), attributed in the NC6 to the shifts towards a service-based economy, fuel switching and efficiency improvements. Conversely, sizeable growth in emissions was observed for perfluorocarbons (PFCs) (by 13.0 per cent), resulting from semiconductor manufacturing and primary aluminium production, and for hydrofluorocarbons (HFCs) (by 12.2 per cent), resulting primarily from the substitution of ozone-depleting substances. Further information on the review of emissions and emission trends is provided in chapter II.A of the report on the technical review of the sixth national communication (IDR/NC6).

14. During the review, the United States provided a preliminary version of its 2014 GHG emission inventory (submitted in April 2014), which indicated a continuation of the existing emission trend and a further decline in emissions in 2012 of 3.5 per cent below the 2011 level. This suggests that in 2012 total emissions including LULUCF were already 9.8 per cent below the 2005 level and that the decrease in emissions excluding LULUCF was 10.2 per cent. In its NC6, the United States reported that a further increase in electricity production from natural gas at the expense of coal, an increase in electricity production from renewables, some decrease in the electricity demand due to mild winters, drops in fuel used for transportation due to some decrease in vehicle-miles travelled and an increase in efficiency more than offset the effect on emissions of the rebound of the economy in 2012.

15. The BR1 makes reference to the national institutional arrangements for measuring progress made towards the Party's emission reduction target, which are explained in more detail in the national inventory report of the 2013 inventory submission (in section 1.2 on institutional arrangements). The arrangements encompass those national arrangements established in accordance with the reporting requirements related to national inventory arrangements contained in the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories" (hereinafter referred to as UNFCCC Annex I reporting guidelines) that are required by paragraph 3 of the UNFCCC reporting guidelines on BRs.

16. Accordingly, the United States Environmental Protection Agency (EPA), in cooperation with other government agencies, prepares the annual GHG inventory. A number of agencies and individuals are engaged in supplying data and reviewing or preparing the inventory, including federal and state government authorities, research and academic institutions, industry associations and private consultants. The ERT encourages the United States to provide a summary of the national inventory arrangements and any changes thereto in its next biennial report.

17. In addition to the national inventory arrangements, the United States has in place arrangements for tracking the progress of individual PaMs implemented or planned by agencies across the federal Government, which are reported on in chapter 4 of the Party's NC6 and reflected in paragraph 19 of the IDR/NC6.

B. Assumptions, conditions and methodologies related to the attainment of the quantified economy-wide emission reduction target

18. In its BR1 and CTF table 2, the United States provided information describing its target, which is to reduce its GHG emissions in the range of 17 per cent below the 2005 level by 2020.

19. The target includes all GHGs included in the UNFCCC Annex I reporting guidelines, namely carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), HFCs,

PFCs, sulphur dioxide (SF_6) and nitrogen trifluoride (NF_3). It also includes all Intergovernmental Panel on Climate Change (IPCC) sources and sectors included in the annual GHG inventory in accordance with the aforementioned guidelines. The global warming potential (GWP) values used are those from the IPCC Fourth Assessment Report. Emissions and removals from the LULUCF sector are accounted using a net-net approach, including a production approach to account for harvested wood products. During the review, the United States clarified that the formulation of the target 'in the range of 17 per cent' does not ascribe a specific margin to the range. It recognizes the potential impact of various factors on emissions in a single year in relation to the target.

20. Although the information on the economy-wide emission reduction target submitted by the United States, as reflected in document FCCC/SB/2011/INF.1/Rev.1, contains certain conditions and assumptions associated with the attainment of the target, as well as references to longer-term targets beyond 2020,[4] no discussion on such issues is included in the BR1. It is, however, acknowledged that the target for 2020 represents a firm commitment. The ERT encourages the United States to clarify the status of the target and conditions provided in the previous submissions when reporting thereon in its next biennial report.

21. The United States did not report in its BR1 on any plan to use international market-based mechanisms for meeting its emission reduction target. During the review, the United States confirmed that it does not envisage using such mechanisms for meeting its target. The ERT noted that it would be useful for the Party to include an explicit statement on its plans in relation to using such mechanisms in its next biennial report.

22. The originally submitted CTF tables did not contain some of the required information in relation to the description of the Party's emission reduction target that was included in the text of the BR1, such as on the use of LULUCF, or other information, such as on the use of market-based mechanisms. That information was discussed during the review week and reflected in CTF table 2(d) that was resubmitted on 20 March 2014. The ERT encourages the United States to provide transparent information describing its target in the CTF tables to be submitted in conjunction with its next biennial report.

C. Progress made towards the achievement of the quantified economy-wide emission reduction target

23. In its BR1 and CTF tables 3 and 4, the United States reported information on its mitigation actions, and their effects, that have been implemented and planned since its NC5 to achieve its emission reduction target. The information reported in the text of the BR1 on the LULUCF sector is consistent with that reported in CTF table 4(a). However, information on the contribution of the LULUCF sector to the progress made towards the target was not reported in CTF tables 4 and 4(a) (see para. 25 below). The use of international market-based mechanisms is not discussed either in the BR1 or in CTF tables 4 and 4(b) as it is not relevant to achieving the target for 2020. The ERT recommends that the United States report transparent information describing its target, including the use of market-based mechanisms for achieving it, in the text of its next biennial report and the relevant CTF tables, as well as information on the LULUCF sector in the relevant CTF tables.

24. The ERT reviewed the reported information and provided its assessment of the progress made by the Party towards achieving its target. It acknowledges the progress made

[4] The submission of the United States states that "the pathway set forth in pending legislation would entail a 30 per cent emission reduction by 2025 and a 42 per cent emission reduction by 2030, in line with the goal to reduce emissions by 83 per cent by 2050".

by the United States, with an emission reduction of 6.5 per cent achieved by 2011 compared with the 2005 emissions level, and a potentially even higher emission reduction of 9.8 per cent by 2012 based on preliminary data from the Party's 2014 GHG inventory.[5]

25. According to the projections presented in the Party's NC6, the United States meeting its economy-wide target of reducing its total GHG emissions in the range of 17 per cent below the 2005 level by 2020 with the measures implemented as at September 2012 is likely to be very difficult. Therefore, additional measures were deemed necessary. Such measures are planned in the President's CAP released in June 2013. They are described in the BR1 and their technical assessment is presented in chapter II.C.1 below. One of the challenges in attaining the target is the significant uncertainty associated with both the effect of the additional measures envisaged in the CAP and the future carbon sequestration trends in the LULUCF sector. The target seems to be achievable if the effects of the additional measures and the level of carbon sequestration are at the upper end of their estimated ranges. The ERT noted the transparent approach taken by the United States in assessing and presenting these uncertainties in the BR1.

26. The projections presented in the BR1 suggest that, despite those uncertainties, the implemented PaMs presented in the NC6 and the additional measures presented in the BR1 have the potential to deliver the significant emission reductions necessary to put the United States on course to attaining its target for 2020. However, it is possible that further measures will be needed to that end. The need for such measures could become clearer after the final rules and programmes to implement the President's CAP have been agreed and put in place, and their effect will also become less uncertain when the uncertainty of the carbon sequestration in the LULUCF sector is reduced as it gets closer to 2020. For example, the BR1 refers to "increasing levels of clean-energy generation", implying establishing carbon pollution standards for both new and existing power plants. However, at the time of the review, the proposal for new power plants was still under consideration, and the one for existing plants was expected in June 2014 with a view to adopting the standards in 2015 (see para. 32 below).

1. Mitigation actions and their effects

27. The United States provided in its BR1 comprehensive, complete, transparent and well-organized information on its package of mitigation actions introduced to achieve its target. While the Party's NC6 focuses on the PaMs implemented and adopted, the BR1 has its main focus on PaMs that are under development, as part of the 2013 President's CAP, and can mostly be considered as planned. CTF table 3 provided information on mitigation actions organized by sector and by gas for 2011 and 2020 that is consistent with the relevant information reported in the NC6. A detailed review of the reported information is provided in chapter II.B of the IDR/NC6.

28. The ERT acknowledged that recent years have seen a steady strengthening of the climate change policies of the United States. This was achieved mainly by enhanced action and regulation within existing legislation, such as the Clean Air Act in particular (see paras. 21 and 23 of the IDR/NC6), and by additional planned actions within the framework of the CAP, which both contributed to shifting climate policy from relying mostly on voluntary approaches towards regulations with a higher degree of reliability of emission reduction

[5] The quantified economy-wide emission reduction target by the United States is expressed using the GWP values from the IPCC Fourth Assessment Report, while emission levels are assessed using the values from the IPCC Second Assessment Report, as per the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories".

estimations, and by providing added incentives for clean-energy technologies, in particular through the American Recovery and Reinvestment Act. Policies, actions and initiatives at the regional, state and local levels have provided a major contribution to the emission reductions effort in the United States. The 2013 CAP, in turn, provides a foundation for significant additional actions that are critical for the United States to be able to attain its emission reduction target for 2020 (see paras. 25, 26 and 35 of the IDR/NC6).

29. With regard to the PaMs already in place, the ERT noted the significant contribution of the enhanced fuel-efficiency standards and the first ever GHG emission standards for passenger cars, light-duty trucks and medium-duty passenger vehicles towards achieving the Party's target for 2020 (see para. 46 of the IDR/NC6). The standards were adopted in two phases: the first phase applicable for model years 2012–2016 and the second phase applicable for model years 2017–2025 to allow for the continuous tightening of the standards. Thus, the standards will contribute to emission reductions not only in the lead-up to 2020 but also beyond. For example, the most significant is the mitigation effect of the programme on light-duty vehicles and fuel economy standards, which was estimated at 35 000 kt CO_2 eq by 2011 and is expected to increase to 236 000 kt CO_2 eq by 2020.

30. Other policies that delivered significant emission reductions were those resulting in the more than doubling of power generation from wind and solar energy between 2008 and 2012 (mitigation impact of renewable energy PaMs estimated at 6 700 kt CO_2 eq by 2011), and the energy-efficiency standards and labels that were set for nearly 40 types of energy-consuming products (mitigation effect of PaMs addressing appliances and labels, including lighting is 165 000 kt CO_2 eq by 2011). Among the policies targeting non-CO_2 emissions, the most significant emission reductions were delivered through the Significant New Alternatives Policy (SNAP) Programme (mitigation impact of 206 900 kt CO_2 eq by 2011), the federal air standards for the oil and gas industry and the Landfill Air Regulation (mitigation impacts of those PaMs by 2011 is not available but it is estimated that it will reach 162 700 kt CO_2 eq by 2015).

31. The CAP sets the framework and direction for future climate policy and is aimed at putting the United States on the path towards reaching its emission reduction target for 2020. Its mitigation impact is estimated to range between 610 000 and 1 025 000 kt CO_2 eq by 2020. The CAP provides for executive actions across its three key pillars: reducing emissions, preparing for the impacts of climate change and leading international efforts to combat climate change and prepare for its impacts. In addition, it strengthens the holistic approach to climate policy as it presents in a single policy framework domestic and international responses, and encompasses within domestic responses both mitigation and adaptation.

32. Among the PaMs included in the CAP, the ERT acknowledged that new proposed standards to reduce carbon pollution from existing power plants appear to be the single most effective policy for reducing emissions in the near and medium terms, making a major contribution towards the achievement of the Party's target for 2020. Standards for existing power plants, due for adoption in 2015, despite some uncertainty regarding their final scope and stringency and how they will be implemented, are expected to provide emission reductions in addition to the reductions resulting from the standards for new plants already set in 2013. The new standards will work in conjunction with the state-level emissions trading schemes and are seen most likely as the minimum standards for further regulatory action at the subnational level.

33. Other policies and policy initiatives under the CAP include doubling the electricity produced from wind and solar sources by 2020, unlocking long-term investments in clean-energy innovation, making the United States' commercial and industrial buildings at least 20 per cent more energy-efficient by 2020, setting new goals for efficiency standards for appliances and federal buildings, advancing vehicle fuel efficiency and GHG emission

standards, preserving the role of forests in climate change mitigation and phasing out fossil-fuel subsidies. Among the policies and programmes targeting non-CO_2 gases, two administered by EPA stand out, namely reducing emissions from HFCs, mostly through the SNAP Programme, and reducing CH_4 emissions through a comprehensive inter-agency strategy. Table 2 provides a concise summary of the key mitigation actions implemented, adopted and planned by the United States to achieve its emission reduction target.

Table 2
Summary of information on mitigation actions reported by the United States of America

Sectors affected	*List of key mitigation actions*	*Estimate of mitigation impact (kt CO_2 eq)*
Policy framework and cross-sectoral measures	Climate Action Plan (2013)	610 000–1 025 000 kt CO_2 eq by 2020
	Clean Air Act (1963, 1970, 1977 and 1990)	NA
	Energy Independence and Security Act (2007)	NA
	American Recovery and Reinvestment Act (2009)	NA
	Executive Order 13514 on Goals and Emission Targets	NA
Energy	Carbon pollution standards for new and existing power plants	NA
	Carbon capture and storage demonstration and large-scale geological storage	1 000 by 2011; 7 000 by 2015; 16 200 by 2020
	Nuclear Power Waste Policy Act	NA
Energy supply/ renewable energy	Renewable Portfolio Standards	NA
	Biomass initiatives	NA
	Onshore and offshore renewable energy development programmes	6 700 by 2011; 25 600 by 2015; 41 500 by 2020
	Clean Energy Programmes	29 600 by 2011; 44 000 by 2015; 73 300 by 2020
Residential and commercial sectors (energy efficiency)	ENERGY STAR Programmes	221 400 by 2011; 218 200 by 2015; 277 900 by 2020
	Appliance and Equipment Energy Efficiency Standards Programme (including lighting)	165 000 by 2011; 233 000 by 2015; 257 000 by 2020
	Building Energy Codes	NA
Transport	National Programme for Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards Rule	35 000 by 2011; 92 000 by 2015; 236 000 by 2020
	National Programme for Heavy-Duty Vehicle Greenhouse Gas Emissions and Fuel Efficiency	NA by 2011 and 2015; 37 700 by 2020

Sectors affected	*List of key mitigation actions*	*Estimate of mitigation impact (kt CO_2 eq)*
	Standards	
	Renewable Fuel Standard	NA by 2011 and 2015; 138 400 by 2020
	Light-duty vehicle fuel economy and environment label	NA
	SmartWay Transport Partnership	NA by 2011 37 000 by 2015; 43 000 by 2020
	Federal transit, highway and railway programmes	NA
	Next Generation Air Transportation System	NA by 2011; 1 000 by 2015; 3 800 by 2020
Industrial processes	Significant New Alternatives Policy Programme	206 900 by 2011; 252 000 by 2015; 311 100 by 2020
	Natural Gas STAR Programme	35 300 by 2011; 20 600 by 2015; 22 100 by 2020
	Federal air standards for the oil and natural gas industry	NA by 2011; 32 600 by 2015; 39 900 by 2020
Agriculture and forestry	Conservation Reserve Programme	51 600 by 2011; 61 200 by 2015 and 2020
	Natural Resources Conservation Service	11 900 by 2011; 20 100 by 2015; 27 600 by 2020
Waste management	Landfill Air Regulation	NA by 2011; 162 700 by 2015; 183 100 by 2020
	Landfill Methane Outreach Programme	15 800 by 2011; 14 300 by 2015; 15 700 by 2020
	Sustainable Materials Management Programme	NA by 2011; 30 by 2015 and 2020

Abbreviation: NA = not available.

34. The ERT noted the significant and growing role of state- and local-level governance in climate change policymaking and implementation, which is reflected not only in the effective implementation of mitigation actions adopted at the federal level, but also in the further enhancement and strengthening of actions at the state and city levels (see chapter II.B.5 of the IDR/NC6). Conversely, actions at the subnational level have paved the way for policy development at the federal level, as demonstrated by the role played by the vehicle efficiency standards in California in reducing the carbon intensity of motor fuel, and the Regional Greenhouse Gas Initiative and California in piloting emissions trading schemes.

35. The United States provided information on its domestic institutional arrangements, including the institutional, legal, administrative and procedural arrangements used for domestic compliance, monitoring, reporting, archiving of information and evaluation of the progress made towards achieving its emission reduction target. The United States explained that information on changes in institutional arrangements was not provided; as such information does not necessarily pertain to the BR1. During the review, the ERT was provided with further comprehensive information, in particular on the methodologies used for assessing the effects of the additional measures contained in the 2013 CAP and those used for preparing projections.

36. The United States provided, to the extent possible, detailed information on the assessment of the economic and social consequences of its response measures. It reported such information, which is relevant to its commitments under Article 4, paragraphs 8 and 9, of the Convention, in box 1 of the BR1 and elaborated thereon during the review. The ERT noted that the United States considers the facilitation of the least developed countries to become clean-energy and low-emission economies as its most adequate response and relevant initiatives target mainly the energy sector in partner countries. It also noted that the United States' PaMs address all sources and sinks, which leads to a balance in their effects on different commodities traded on the international market.

2. Estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use change and forestry

37. The contribution of the LULUCF sector to meeting the Party's emission reduction target for 2020 is reported in the BR1 to be within the range of 972 467.78 to 868 416.37 kt CO_2 eq for 2005 and 2010, respectively. Regarding the use of international market-based mechanisms, the United States did not report any plans for the use of such mechanisms in the BR1 or in CTF table 4(b). During the review, it was confirmed that there is currently no intention to use such mechanisms to meet the target for 2020 (see para. 21 above). Table 3 illustrates how the United States reported on the use of units from international market-based mechanisms and how the LULUCF sector is contributing to achieving the Party's target.

Table 3
Summary information on the use of units from market-based mechanisms and land use, land-use change and forestry as part of the reporting on the progress made towards achievement of the target by the United States of America

Year	*Emissions excluding LULUCF (kt CO_2 eq)*	*LULUCF emissions/removals (kt CO_2 eq)*	*Emissions including LULUCF (kt CO_2 eq)*	*Use of units from the market-based mechanisms (kt CO_2 eq)*
Base year (2005)	7 169 899.34	972 467.78	6 197 431.56	NA
1990[a]	6 169 592.14	780 846.50	5 388 745.64	NA
2010	6 790 642.12	869 094.35	5 921 547. 77	NA
2011	6 665 700.87	868 416.37	5 797 284.50	NA

Source: Information on emissions excluding and including LULUCF and on LULUCF emissions and removals is taken from common tabular format table 1.

Abbreviations: LULUCF = land use, land-use change and forestry, NA= not applicable.

[a] Emissions and removals for 1990 shall be reported, if a base year other than 1990 is used.

3. Projections

38. The United States provided in its BR1 projections for a 'with additional measures' scenario for 2020. It reported a 'with measures' scenario for 2011 and 2020 in CTF table 6(a), but it did not include the 'without measures' and 'with additional measures' scenarios in CTF tables 6(b) and 6(c). As explained by the United States during the review, the projections were not included in the CTF tables because of difficulties in disaggregating the projected emissions, in particular for the 'with additional measures' scenario, across sectors and gases, given that the measures are still under development, and also because of the fact that the CTF tables do not allow for entering ranges of values. An overview of the reported information is provided in chapter III.C of the IDR/NC6.

39. The United States provided information on the methodology used to prepare the projections for the 'with additional measures' scenario as additional information to the BR1 and information on assumptions used in CTF table 5. The projections are based on assessing the potential emission reductions by 2020 resulting from additional PaMs in three key areas: energy-related CO_2 (485–800 Mt CO_2 eq), CH_4 (25–90 Mt CO_2 eq) and HFCs (100–135 Mt CO_2 eq). To provide a comparison, the BR1 also provides an overview of the 'with measures' scenario, which is reported in detail in the NC6. Further information on the methodology used for making the projections and a chart illustrating them is provided in the IDR/NC6.

40. The BR1 acknowledges the uncertainty with respect to the expected impact of additional PaMs, as the modalities for their implementation have not yet been finalized. Their effect by 2020 has been estimated at an emission reduction of between 610 000 and 1,025 000 kt CO_2 eq. This estimate suggests that there is a likelihood that the 17 per cent emission reduction target will be met with the additional measures presented in the BR1, given that the additional measures can prevent the rebounding of emissions after 2012 that is expected to happen in the absence of such measures in accordance with the 'with measures' scenario (see para. 90 of the IDR/NC6). Therefore, such additional measures were deemed necessary and they were outlined in the CAP (see paras. 25 and 26 of the IDR/NC6). However, there is also the possibility that the target will not be reached and that further measures might be required (see para. 91 of the IDR/NC6).

D. Provision of financial, technological and capacity-building support to developing country Parties

1. Provision of support to developing country Parties

41. In its BR1, including CTF tables 7, 8 and 9, the United States reported information on the provision of financial, technological and capacity-building support required under the Convention. The information is considered to be mostly complete and mostly transparent.

42. The BR1 does not explicitly include information required by the UNFCCC reporting guidelines on BRs, such as information on the national approach for tracking financial resources, indicators, delivery mechanisms used and allocation channels tracked. A description of the methodology used to report on financial support, including information on underlying assumptions, and the methodologies used to produce information on finance was also not included. However, during the review, the United States pointed out that such information is referenced in the BR1 and included in a separate paper, which was provided to the ERT and was placed on the UNFCCC website in conjunction with the BR1. This paper provides details of several methodologies used for preparing information on international climate finance for the BR1, including for determining which funds are

'climate specific' and committed, and on the mobilization of private finance. The ERT took note of the methodological paper. The ERT recommends that the information on the national approach for tracking financial resources, indicators, delivery mechanisms used and allocation channels tracked be provided in the Party's next biennial report to ensure the completeness of the reporting. The ERT also recommends that the United States provide a description of the methodology used to report on financial support, including information on underlying assumptions, and the methodologies used to produce information on finance in its next biennial report.

43. In its BR1, the United States provided information on what "new and additional" financial resources it has provided pursuant to Article 4, paragraph 3, of the Convention and clarified how it has determined these resources as being "new and additional". The ERT noted the explanations provided by the United States (see para. 99 of the IDR/NC6).

44. With regard to the Party's most recent financial contributions to fast-track finance to enhance the implementation of the Convention by developing countries, the United States provided USD 7.5 billion from the fiscal year 2010 to 2012, corresponding to approximately 20 per cent of the total fast-track finance portfolio globally, which reached more than 120 countries through bilateral and multilateral channels (see para. 100 of the IDR/NC6). Table 4 includes some information reported by the United States on its provision of financial support.

45. The United States included in its BR1 and stressed throughout the review that its funding for mitigation and adaptation activities effectively addresses the needs of Parties not included in Annex I to the Convention (non-Annex I Parties) through country-led processes and country-owned plans. The ERT noted the programmes and projects undertaken by the United States Agency for International Development (USAID), the Millennium Challenge Corporation and the Overseas Private Investment Corporation geared towards addressing specific needs of developing countries (see para. 108 of the IDR/NC6).

Table 4
Summary of information on provision of financial support in 2011–2012
(Millions of United States dollars)

	Years of disbursement	
Allocation channel of public financial support	*2011*	*2012*
Official development assistance[a]	30 919.6	30 687.0
Contributions through multilateral climate change funds, including:	323.6	404.0
Contributions to the Global Environment Facility	44.9	59.9
Contributions through United Nations bodies	44.4	44.4
Contributions through bilateral, regional and other channels[b]	2 825.6	1 836.1
Fast-start finance	3 193.6	2 284.5

[a] Query Wizard for International Development Statistics, available at <http://stats.oecd.org/qwids/>.

[b] These contributions cover only climate-specific contributions.

2. Approach used for tracking support provided

46. The United States included in its BR1 information on how it refined its climate finance tracking methodologies, including through strict guidelines and eligibility criteria and indicators when collecting and reporting information, and reviewing the budgets of the

United States Department of State and USAID and the activity planning database. The methodologies for preparing information on international climate finance for the BR1 provided to the ERT during the review contained additional information on the methodology used to specify funds as climate specific and committed (see para. 42 above).

47. In its BR1, the United States reported that its climate finance has been allocated on the basis of three priority areas of the President's Global Climate Change Initiative, which represents the United States' vision of supporting low-carbon development strategies and the transition to a sustainable clean-energy economy, building lasting resilience to impacts in developing countries and reducing emissions from deforestation and land degradation. In addition, the United States reported that climate change considerations and priorities have been integrated into all USAID programmes to ensure that all sector portfolios are climate resilient and, where possible, reduce GHG emissions (see paras. 102 and 103 of the IDR/NC6). The ERT noted that the United States could improve the transparency of its reporting by including information on the institutions in charge of the development, implementation and archiving of the United States' climate finance tracking system in its next biennial report.

48. Recalling the encouragement made in the previous review report that the United States use the Organisation for Economic Co-operation and Development Rio Markers to present its financial contributions to developing countries for mitigation and adaptation through bilateral assistance, the ERT noted the ongoing efforts of the United States to develop indicators to track climate finance.

49. The BR1 includes detailed information on the financial support provided though bilateral and regional channels and multilateral channels in 2011 and 2012. The BR1 also provides information on the thematic focus of the support, the types of financial instruments used and the support provided by the private sector.

50. The BR1 also includes detailed information for 2011 and 2012 on the financial support provided though bilateral (USD 2.4 billion) and regional (USD 700 million) channels. An almost equal share of public finance was provided during the same period through development finance and export credits (USD 2.3 billion), which use public money to mobilize much larger amounts of private finance.

51. The ERT noted that the United States provided its contribution through multilateral channels, as reported in its BR1 (and in CTF table 7(a)), and indicated climate-specific amounts, for example contributions to specialized multilateral climate change funds, such as the Clean Technology Fund, the Least Developed Countries Fund and the Special Climate Change Fund, amounting to more than USD 484 million in total for 2011–2012. The ERT acknowledged the financial contributions provided by the United States, which is one of the largest donors to the funds. During the review, the United States clarified how it gathered information on climate-related international programmes and activities financed through multilateral institutions in 2011 and 2012 (see para. 104 of the IDR/NC6). The ERT took note of the information provided, which is highly relevant and increased the transparency of the reporting.

52. In terms of the thematic focus of public financial support, as reported in CTF table 7 for 2011, the majority of the total public financial support was allocated to mitigation, namely 72.9 and 81.9 per cent of funds allocated through multilateral channels and bilateral, regional and other channels, respectively. In 2012, the shares of total public financial support allocated for mitigation through the same channels were 72.4 and 81.5 per cent, respectively.

53. The ERT noted that in 2011, 71.2 per cent of financial contributions made through bilateral and regional channels and multilateral channels were allocated to energy, while 10.7 per cent went to agriculture and forestry and the remaining 18.1 per cent to funding for

activities that are cross-cutting across mitigation and adaptation, as reported in CTF table 7. The corresponding figures for 2012 were 70.0 per cent, 11.5 per cent and 18.5 per cent, respectively. Hence, most of the funding is being allocated to mitigation activities (which mainly cover such priorities as clean energy and land use). The ERT noted that the United States could take a more balanced approach in the allocation of funds to assist non-Annex I Parties to mitigate emissions and adapt to the adverse effects of climate change.

54. CTF table 7(b) included information on the types of instruments used in the provision of assistance to developing countries, which consisted of grants, insurance, loan guarantees, non-concessional insurance and investment funds. The ERT noted that the share of grants provided in 2011 and 2012 was, on average, approximately 55.0 per cent of the total public financial support. However, a number of initiatives supported by those grants amounted to approximately 83.6 per cent in 2011 and 89.9 per cent in 2012. This indicates that projects and programmes that required larger amounts of funding were in that period financed via other, non-grant-based, finance.

55. During the review, the Party stressed the difficulty of reporting on private financial flows leveraged by bilateral climate finance towards mitigation and adaptation activities in non-Annex I Parties, since most of the time the initiatives undertaken by the private sector are not exactly known. However, the United States reported measures to encourage private-sector mitigation and adaptation activities in developing countries (e.g. by facilitating access to international markets, trade shows and trade missions).

56. The issue related to the methodologies used for calculating the financial support provided by the private sector was addressed in the paper on the methodologies used for preparing information on international climate finance for the BR1. The United States noted, in this regard, that, since not all agencies track private finance mobilized, it is currently not possible to report any figure for it. The Party provided the example of how Overseas Private Investment Corporation calculates private-sector investment leveraged, namely by comparing the amount of its investment with the total amount of private finance invested that does not include contributions made by other bilateral or international financial institutions or governments.

3. Technology development and transfer

57. In its BR1, including CTF table 8, the United States provided information on activities related to the transfer of technology to developing countries, including information on the public and private sectors.

58. The ERT noted that the United States is engaged in several global and regional activities to support the development of technology and enhancement of endogenous activities. Supporting illustrative activities are included in the BR1, however, those examples do not demonstrate how the support is provided to capacities and technologies of non-Annex I Parties at the national level. The ERT recommends that the United States provide such information in its next biennial report. The ERT noted that the United States did not clearly identify which information relates to measures and activities implemented since the previous national communication. The ERT recommends that the Party provide that information in its next biennial report and indicate, if applicable, any changes in policy that could have an impact on the activities related to technology transfer and capacity-building.

59. The ERT noted that in its NC6 and BR1, including CFT table 8, the United States reported on its success stories in relation to technology transfer. During the review, the Party clarified that there are failure stories as well, in particular when there was insufficient political support for concrete activities and projects (see para. 111 of the IDR/NC6). The ERT encourages the United States to include, where feasible, in its next biennial report its

experience with technology transfer, and in particular failure stories, in order to share relevant experience internationally and increase learning opportunities for the success of future activities.

60. The ERT also noted that the United States provided in its BR1 and in CTF table 8 information on measures and activities related to technology transfer; noting that the information was not exhaustive but only illustrative. The ERT took note of the additional information provided by the United States in CTF table 8 on the projected and estimated emission reduction effects of technology transfer programmes or avoidance measures. The ERT noted that providing information on how those estimates were calculated would enhance the transparency of the next biennial report.

61. However, the ERT noted that the United States, when referring to the targeted area, could make more explicit the type of adaptation associated with the measures and activities implemented. For instance, the project on the Famine Early Warning System Network focuses on vulnerability assessment and not necessarily on adaptation measures. The disaggregation of adaptation into its different components (capacity-building, vulnerability studies, etc.) could contribute to the enhancement of transparency.

62. The BR1 includes information on several steps initiated, particularly since 2010, to promote, facilitate and finance the transfer of technology to developing countries (see para. 112 in the IDR/NC6).

4. Capacity-building

63. In its BR1, including CTF table 9, the United States provided information on how it has provided capacity-building support. The examples provided indicate that the Party's capacity-building addresses needs identified in the framework for capacity-building in developing countries established under decision 2/CP.7, such as: the enhancement and/or creation of an enabling environment; research and systematic observation, including meteorological, hydrological and climatological services; vulnerability and adaptation assessment; and capacity-building for the implementation of adaptation measures. The ERT noted that the United States could improve the transparency of its reporting by identifying the implementation status (ongoing, finished, planned, etc.) of its capacity-building activities in its next biennial report.

64. The ERT took note of the information reported by the United States on the plans of USAID to double its funding provided to local institutions in developing countries by 2015 from the 14.3 per cent allocated in 2012.

III. Conclusions

65. The ERT conducted a technical review of the information reported in the BR1 of the United States and concluded that the information is in accordance with the UNFCCC reporting guidelines on BRs. The ERT also concluded that the BR1 provides a good overview of information on emissions and removals related to the Party's quantified economy-wide emission reduction target and descriptions of the target, progress made by the United States to achieve the target and the provision of support to developing country Parties. During the review, the United States provided additional information that augmented the information reported in the NC6 and facilitated the understanding thereof, including the methodologies used for assessing the effects of the additional measures contained in the 2013 CAP and the methodologies used for preparing information on international climate finance for the BR1.

66. The United States' emissions for 2011 were estimated to be 8.0 per cent above its 1990 level excluding LULUCF and 7.6 per cent above including LULUCF. The year of 2007 marked a turning point for the Party's emissions, as the upward trend in emissions changed to a downward one, with emissions including LULUCF having reduced by 2011 by 6.5 per cent compared with the 2005 level, and, according to the preliminary data in the Party's draft 2014 GHG inventory, they have reduced by an additional 3.5 per cent between 2011 and 2012.

67. Since 2005, in addition to the macroeconomic changes resulting from the economic downturn in the late 2000s, emission trends have been influenced by two significant developments in the United States: the extensive exploration of the vast resources of shale gas in the United States, significant fuel switching from coal to natural gas for power generation; and the doubling of the share of electricity generation from renewable energy. Since 2010, those developments, together with PaMs influencing emissions from other sectors and sources, such as transportation and energy-efficiency improvements, have more than offset the impact on emissions of the rebound of the economy.

68. In its BR1, the United States provided information on its emission reduction target, which is to reduce its GHG emissions in the range of 17 per cent below the 2005 level by 2020. The target includes all GHGs included in the UNFCCC Annex I reporting guidelines, namely CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3, and all IPCC sources and sectors and uses the GWP values from the IPCC Fourth Assessment Report. Emissions and removals from the LULUCF sector are accounted using a net-net approach, including a production approach to account for harvested wood products. However, the United States did not report on the use of international market-based mechanisms for meeting its target, neither in the text of the BR1 nor in the accompanying CTF tables, as it does not plan to use such mechanisms, as clarified during the review.

69. In reporting on the progress made towards achieving its target, in its BR1 the United States emphasized its mitigation actions implemented and planned since its NC5 to achieve its target. The ERT acknowledged the progress made by the United States, with the emission reduction of 6.5 per cent achieved by 2011, and a potentially even higher reduction by 2012 based on preliminary data from the Party's annual 2014 GHG inventory (see para. 66 above).

70. Looking at the 2020 time-horizon, according to the 'with measures' scenario presented in the NC6, the United States meeting its economy-wide target of reducing its total GHG emissions in the range of 17 per cent below the 2005 level by 2020 with the measures implemented as at September 2012 is likely to be very difficult. This has been recognized by the United States and additional measures were deemed necessary, as reflected in the President's CAP launched in June 2013. However, the ERT noted the challenges in attaining the target, owing to the significant uncertainty associated with both the effect of the additional measures and the future carbon sequestration trends in the LULUCF sector. Therefore, the target seems to be achievable if the effects of the additional measures and the carbon sequestration in the LULUCF sector are at the upper end of their estimated ranges.

71. The 'with additional measures' scenario presented in the BR1, which includes the effect of the 2013 CAP, suggests that, despite those uncertainties, the implemented and additional PaMs have the potential to deliver the significant emission reductions necessary to put the United States on course to attaining its target for 2020. However, it is possible that further measures will be needed to that end. The need for such measures could become clearer after the final rules and programmes to implement the President's CAP have been agreed and put in place, and their effect will also become less uncertain when the uncertainty of the level of carbon sequestration in the LULUCF sector is reduced closer to 2020.

72. The United States has increased its commitments to assist developing countries to mitigate and adapt to climate change, as evidenced from the information reported in the BR1. Climate change has become a key priority of diplomatic and development assistance and has been integrated into all core operations of major foreign assistance agencies, including USAID, the Millennium Challenge Corporation and the Overseas Private Investment Corporation.

73. In its BR1, the United States provided information on what "new and additional" financial resources it has provided pursuant to Article 4, paragraph 3, of the Convention and clarified how it has determined these resources as being "new and additional". With regard to its most recent financial contributions to fast-start financing to enhance the implementation of the Convention by developing countries, the United States provided USD 7.5 billion from the fiscal year 2010 to 2012, corresponding to approximately 20 per cent of the total fast-track finance portfolio globally, which reached more than 120 countries through bilateral and multilateral channels.

74. The United States highlighted in its BR1 and stressed throughout the review that its funding for mitigation and adaptation activities is aimed at addressing effectively the needs of developing countries through country-led processes and country-owned plans. The BR1 includes detailed information for 2011 and 2012 on the financial support provided though bilateral (USD 2.4 billion) and multilateral (USD 700 million) channels. An almost equal share of public finance was provided during the same period through development finance and export credits (USD 2.3 billion), which use public money to mobilize much larger amounts of private finance. The BR1 also provides information on the type of support, sector, funding source and financial instruments used and suggests that most of the support is for mitigation, but that the support for adaptation is sizeable and fast growing.

75. The promotion, facilitation and finance of technology transfer continue to be among the priorities for the development assistance of the United States. This is reflected in the information reported by the United States in its BR1 on the steps taken to that end. The effort is geared mostly at mitigation and includes the engagement of the United States in cooperation and partnerships with developing countries in activities targeting, among others, the market transformation of energy-efficient equipment and appliances and efficient lighting, reducing CH_4 emissions, and terrestrial carbon management. There are also examples in the area of adaptation, such as support for the famine early-warning framework.

76. In the course of the review, the ERT formulated several recommendations relating to the completeness and transparency of the United States' reporting under the Convention. The key recommendations[6] are that the United States:

(a) Improve the completeness of its reporting by including in its next biennial report the following:

(i) A description of its national approach for tracking the provision of financial, technological and capacity-building support to non-Annex I Parties, including information on indicators, delivery mechanisms used and allocation channels tracked;

(ii) A description of the methodology used to report on financial support provided by Parties included in Annex II to the Convention, including information on underlying assumptions and methodologies used to produce information on finance;

[6] The recommendations are given in full in the relevant sections of this report.

(iii) Information on measures taken to support the development and enhancement of the endogenous capacities and technologies of non-Annex I Parties;

(b) Improve the transparency of its reporting by including in its next biennial report the following:

(i) A description of its economy-wide emission reduction target, including information on the use of market-based mechanisms for achieving the target;

(ii) Information on measures and activities related to technology transfer implemented or planned since its previous national communication or biennial report.

Annex

Documents and information used during the review

A. Reference documents

"UNFCCC biennial reporting guidelines for developed country Parties". Annex to decision 2/CP.17. Available at <http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf#page=4>.

"Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention". Annex to decision 23/CP.19. Available at <http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=20>.

FCCC/ARR/2012/USA. Report of the individual review of the inventory submission of the United States of America submitted in 2012. Available at <http://unfccc.int/resource/docs/2013/arr/usa.pdf>.

FCCC/IDR.5/USA. Report of the in-depth review of the fifth national communication of the United States of America. Available at <http://unfccc.int/resource/docs/2011/idr/usa05.pdf>.

Sixth national communication of the United States of America. Available at <http://unfccc.int/files/national_reports/annex_i_natcom/submitted_natcom/application/pdf/2014_u.s._climate_action_report[1]rev.pdf>.

First biennial report of the United States of America. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/first_u.s._biennial_report_rev.pdf>.

2013 GHG inventory submission of the United States of America. Available at <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php>.

B. Additional information provided by the Party

Responses to questions during the review were received from Mr. Andrew Rakestraw (United States Department of State), including additional material on updated policies and measures, greenhouse gas projections and recent climate policy developments in the United States of America. The following documents[1] were also provided by the United States:

Methodologies for assessing the effects from the additional measures consistent with the 2013 Climate Action Plan. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/biennial_report_methodologies_appendix.pdf>.

Methodologies for preparing information on international climate finance for 2014 Biennial report. Available at <http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/biennial_report_international_climate_finance_methodologies.pdf>.

[1] Reproduced as received from the Party.

Meeting the fast start commitment. The US Climate Finance in Fiscal Year 2012. Available at <http://www.state.gov/documents/organization/201130.pdf>.