



giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



Towards Decarbonising Transport

Taking Stock of G20 Sectoral Ambition

EXECUTIVE SUMMARY

Imprint

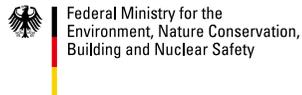
Towards Decarbonising Transport

Taking Stock of G20 Sectoral Ambition

Supported by



On behalf of:



of the Federal Republic of Germany

Published: November, 2017

06-2017-EN

PUBLISHED BY

Agora Verkehrswende

Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
P +49 (0)30 700 14 35-000
F +49 (0)30 700 14 35-129
www.agora-verkehrswende.de
info@agora-verkehrswende.de

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Registered offices (Bonn and Eschborn):

Friedrich-Ebert-Allee 40
53113 Bonn | Germany
P: +49 (0)228 44 60-0
F: +49 (0)228 44 60-17 66

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn | Germany
P: +49 (0)61 96 79-0
F: +49 (0)61 96 79-11 15

info@giz.de
www.giz.de

Authors

Marion Vieweg

Daniel Bongardt, Holger Dalkmann, Christian Hochfeld, Alexander Jung, Elena Scherer

Design, Layout

Creative Republic
Frankfurt am Main

Cover Image

istock.com/pidjoe

Please cite as

Vieweg, Marion; Bongardt, Daniel; Dalkmann, Holger; Hochfeld, Christian; Jung, Alexander; Scherer, Elena (2017): Towards Decarbonising Transport – Taking Stock of G20 Sectoral Ambition. Report on behalf of Agora Verkehrswende and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Towards Decarbonising Transport – Taking Stock of G20 Sectoral Ambition

This November nearly 30,000 delegates are convening in Bonn, Germany, to participate in the 23rd COP summit. While the transport sector was neglected for more than two decades in climate negotiations, it has gained new prominence in the wake of the COP21 summit in Paris. COP23 will focus on how to deliver on the ambitious targets of the Paris Climate Accord. And one thing is clear: limiting global warming to 2°C will require robust policy action in the transport sector.

Transforming transport is key to delivering on the Paris Agreement.

The transport sector already consumes more than half of global oil demand and accounts for almost one quarter of global energy-related CO₂ emissions. Furthermore, the sector's emissions are on the rise, with some forecasts predicting emissions to grow 60% by 2050 (ITF Transport Outlook 2017, OECD/ITF). Such projected increases pose a major challenge to climate policy. They underscore that significant progress in reducing CO₂ emissions in transport is essential for meeting the goals of the Paris Agreement.

In order to spotlight the crucial importance of the transport sector for climate policy, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Agora Verkehrswende have compiled the report

“Towards Decarbonising Transport – Taking Stock of G20 Sectoral Ambition”. The report summarises the mitigation policies enacted for the transport sector by G20 countries, and illuminates where more action is needed. Ultimately, the report aims to serve as a valuable tool for the climate community to gain a better understanding of the overall status of CO₂ mitigation policies in the transport sector.

“Decarbonising transport has to be understood as a global project. Otherwise the ambitious targets of the Paris Climate Accord cannot be met and millions of people will be affected by the severe consequences of global warming.”

Christian Hochfeld,
Executive Director, Agora Verkehrswende

The G20 is responsible for the lion's share of energy consumption and transport related greenhouse gases.

Home to 64% of the world's population, G20 countries account for 80% of global GDP, use almost 80% of total primary energy and were responsible for over 80% of global energy related CO₂ emissions in 2014. At the same time, G20 countries are collectively responsible for 69% of global emissions in the transport sector, 85% of which stem from road transport, followed by aviation, which is responsible for 6% of the sector's emissions. Accordingly, the G20 has an obligation to lead the way in decarbonising transport, and should help non-G20 countries adopt pathways towards a carbon-free transport sector.

Transport is mentioned in most NDCs, but more ambition is needed.

Despite the announced US withdrawal from the Paris Agreement, the G20 as a whole is strongly committed to climate action, as evidenced by the adoption of the Climate and Energy Action Plan for Growth. Nevertheless, the crucial first step to meaningful action is the formulation of a nationally determined contribution (NDC), which is then translated into targets in national energy policy.

While transport is mentioned in the majority of NDCs as an important source of GHG emissions, Japan is the only G20 member with a quantitative GHG emissions target for the sector (27% below 2013 by 2030). However, Germany and France have also communicated sectoral targets in their long-term strategies submitted to the UNFCCC in 2016/17 (Germany: 40-42% below 1990 by 2030; France: at least 70% below 2013 by 2050). Brazil, China, India and South Africa cite quantitative targets in relation to individual measures in their NDCs, and 12 out of the 20 members have specific transport-related measures. By contrast, the EU does not make any reference to mitigation in the transport sector in its NDC.

Australia, South Africa and the US only mention one transport related mitigation measure, while India, Japan and Turkey present a wide range of strategies for reducing emissions in the sector. Countries that also include quantitative goals for individual measures are Brazil (18% target for sustainable biofuels), Canada (30% target for urban public transport), India (36% to 45% target for rail in total land transport) and South Africa (20% target for hybrid-electric vehicles).

Awareness for the importance of transport is clearly on the rise. Yet even countries with sectoral targets lack an overarching implementation strategy. Accordingly, the G20 will need to significantly step up its ambition for the transport sector in the next round of NDC submissions in 2020. Undergirding the announced targets with effective action will be prerequisite for meeting the objectives of the Paris Agreement.

“Transport has gained momentum in international climate change discourse. More than 80% of all NDCs highlight transport as an important sector for climate action, and 105 list mitigation actions, as a recent GIZ analysis shows. But the measures set forth by the NDCs are not yet transformative, and will not culminate in a decarbonised transport sector.”

Daniel Bongardt,

Senior Advisor on Transport and Climate Change, GIZ

Greater ambition also needed at the national level

Generally, G20 countries show more ambition in national policy than at the international level. Five G20 countries have set quantitative GHG emission targets for the transport sector in their national strategies or legislation. Four of these have additional quantitative targets related to specific technologies or efficiency. China has set intensity targets for individual transport subsectors and both Mexico and Saudi Arabia have adopted qualitative long-term goals. However, these national targets remain insufficient for limiting global warming well below 2°C.

The existence of abatement targets for transport indicates that governments have moved from developing visions to implementing actions. And while these actions are in most cases not yet adequate, it is generally easier to ratchet up existing measures than to implement completely new ones. Nevertheless, there are still huge gaps in national legislation. For example, many G20 members lack energy or CO₂ related emission standards for heavy duty vehicles, a few members have policies to support new mobility solutions or non-motorised transport. A further issue is that national policies, laws and regulations that impact transport sector emissions are not always fully consistent. While there may be ambition to decarbonise the sector, counterproductive measures, such as fossil

fuel subsidies, are often in place that work against this goal. Only comprehensive and coherent policymaking can lead to a robust decarbonisation strategy that meets the objectives of the Paris Agreement. Counterproductive policies will jeopardize it.

How to proceed from here?

More ambition and action needed at the national level

Since overall ambition is already falling short and transport is under-represented in the G20's NDCs, there is a clear need for countries to adopt a comprehensive vision for transforming the transport sector. This vision must take into account potentials for promoting public and non-motorised transport, technological advancement, changing mobility patterns, and the development of new infrastructure. Currently we see individual measures going in the right direction, but they are not integrated into a coherent strategy that will allow meaningful progress.

Legislators need to address existing gaps in policy, including in particular the absence of fuel economy and CO₂ emission standards, as well as a lack of policies to promote new mobility services and non-motorised transport. Yet existing policies also need to be strengthened and undergirded with supplementary measures. The elimination of counterproductive subsidies and stronger collaboration between stakeholders

in various sectors and fields, including policymakers, technical experts, civil society representatives and business leaders, are further important steps for robust action in the sector.

Collaboration between G20 members should be expanded

Since the start of collaboration on vehicle efficiency, a number of G20 members have introduced efficiency standards for light and heavy duty vehicles. Future work should build on this success and aim to strengthen these standards towards zero emissions in the near- to mid-term. However, the decarbonisation of the transport sector will not be possible without addressing mobility choices and supporting alternative low-carbon modes of transport. Collaboration within the G20 could facilitate the exchange of best practice and knowledge sharing on new mobility solutions and technologies, thus providing an important boost to the adoption of policies and measures to transform transport.

Transport needs to move up on the international agenda

The formulation of the first NDCs has given valuable momentum to the decarbonisation of the transport sector, but no G20 member has defined a pathway for fully transforming the sector. The NDC cycle, which includes a stocktake in 2018 and the submission of updated contributions every five years, provides an excellent opportunity for countries to engage with

relevant stakeholders and develop a clear and ambitious vision for the sector. The G20 should adopt clear and transparent targets for the transport sector, as this would empower national governments to undertake ambitious action in domestic legislation.

The full report by GIZ and Agora Verkehrswende, titled "Towards Decarbonising Transport – Taking Stock of G20 Sectoral Ambition", is available for download at www.agora-verkehrswende.de/en/publications/towards-decarbonising-transport-taking-stock-of-g20-sectoral-ambition/

About

Acknowledgements

The authors would like to thank reviewers for their valuable inputs on data sets and policies: Rana Adib and Archita Misra of the Renewable Energy Policy Network for the 21st Century (REN21) checked the general energy data sets. Kate Blumberg of the International Council on Clean Transportation (ICCT) kindly reviewed country factsheets for USA, Canada, Mexico and China. Tobias Kuhnimhof of the Institute of Transport Research at the German Aerospace Centre (DLR) checked data on mobility indicators. Behyad Jafari of the Electric Vehicle Council Australia gave input on policies in Australia. Furthermore, staff from GIZ offices in Brazil (Marcos Oliveira Costa, Sebastian Ebert, Jens Giersdorf), China (Jingzhu Li, Shengyang Sun), India (Winfried Damm), Indonesia (Monika Adriatni), Mexico (Mathias Merforth, Sören Rüd), South Africa (Gregor Schmorl), Russia (Yana Tumakova), Saudi Arabia (Salim Al-Bosta) gave input to local policies or feedback to country factsheets.

Agora Verkehrswende

In partnership with key players in the fields of politics, business, academia and civil society, Agora Verkehrswende aims to lay the foundation for a comprehensive climate protection strategy for the German transport sector, with the ultimate goal of complete decarboni-

sation. This climate protection strategy is focused on transitioning the entire transport system from fossil fuels to electricity and fuel generated by renewables. Other important aspects of the strategy include increasing the efficiency of the entire transport system by avoiding unnecessary traffic, transitioning to environmentally friendly modes of transport and increasing the efficiency of individual modes of transport. Active collaboration is required at all levels of politics to bring about the transformation of transport, from the level of national and international policy down to local municipalities. The think tank seeks to consider the necessary interaction between these various levels while striving to promote a shared understanding between stakeholders on promising ways to transition to a decarbonised transport system. Agora Verkehrswende is a joint initiative of the Stiftung Mercator Foundation and the European Climate Foundation.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is a globally active provider of international cooperative services for sustainable development and education. As a federally owned

enterprise, we support the government of Germany in achieving its objectives in the field of international cooperation for sustainable development. GIZ's Advancing Transport Climate Strategies (TraCS) project is funded through the International Climate Initiative of the German Ministry for the Environment, Nature Conservation, Building, and Nuclear Safety (BMUB). Its objective is to enable policy makers in partner countries (Vietnam and Kenya) to specify the contribution that will be made by the transport sector to their respective Nationally Determined Contributions (NDCs). In addition, it seeks to develop detailed knowledge on mitigation potential in order to raise the level of ambition pursued by both countries. The project has a multi-level approach: At the country level, TraCS supports transport ministries and other relevant authorities by systematically assessing GHG emissions in the transport sector and calculating emission reduction potential through the development of scenarios. At the international level, TraCS organises active exchange between implementing partners, technical experts and donor organisations in order to enhance methodological coherence in the quantification of transport sector emissions. These South-South and South-North dialogues aim to increase international transparency in emissions mitigation potential while also harmonising methodological approaches in the transport sector.

In partnership with key players in the field of politics, economics, science and civil society, Agora Verkehrswende aims to lay the necessary foundations for a comprehensive climate protection strategy for the German transport sector, with the ultimate goal of complete decarbonisation by 2050. For this purpose we elaborate the knowledge base of climate protection strategies and support their implementation.

Agora Verkehrswende

Anna-Louisa-Karsch-Str. 2 | 10178 Berlin | Germany

T +49 (0)30 700 14 35-000

F +49 (0)30 700 14 35-129

www.agora-verkehrswende.de

info@agora-verkehrswende.de

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Agora
Verkehrswende 