

**With the new National Energy Strategy
and the Roadmap for Sustainable Mobility,
which role for transport
in Italy's decarbonisation in 1.5°C-consistent pathways
under the Paris Agreement?**

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CLIMATE ACTION IN SUPPORT
OF THE PARIS AGREEMENT
BOLOGNA, 26-27 OCTOBER 2017

4th November 2016

Entry into force
of the Paris Agreement
on climate change

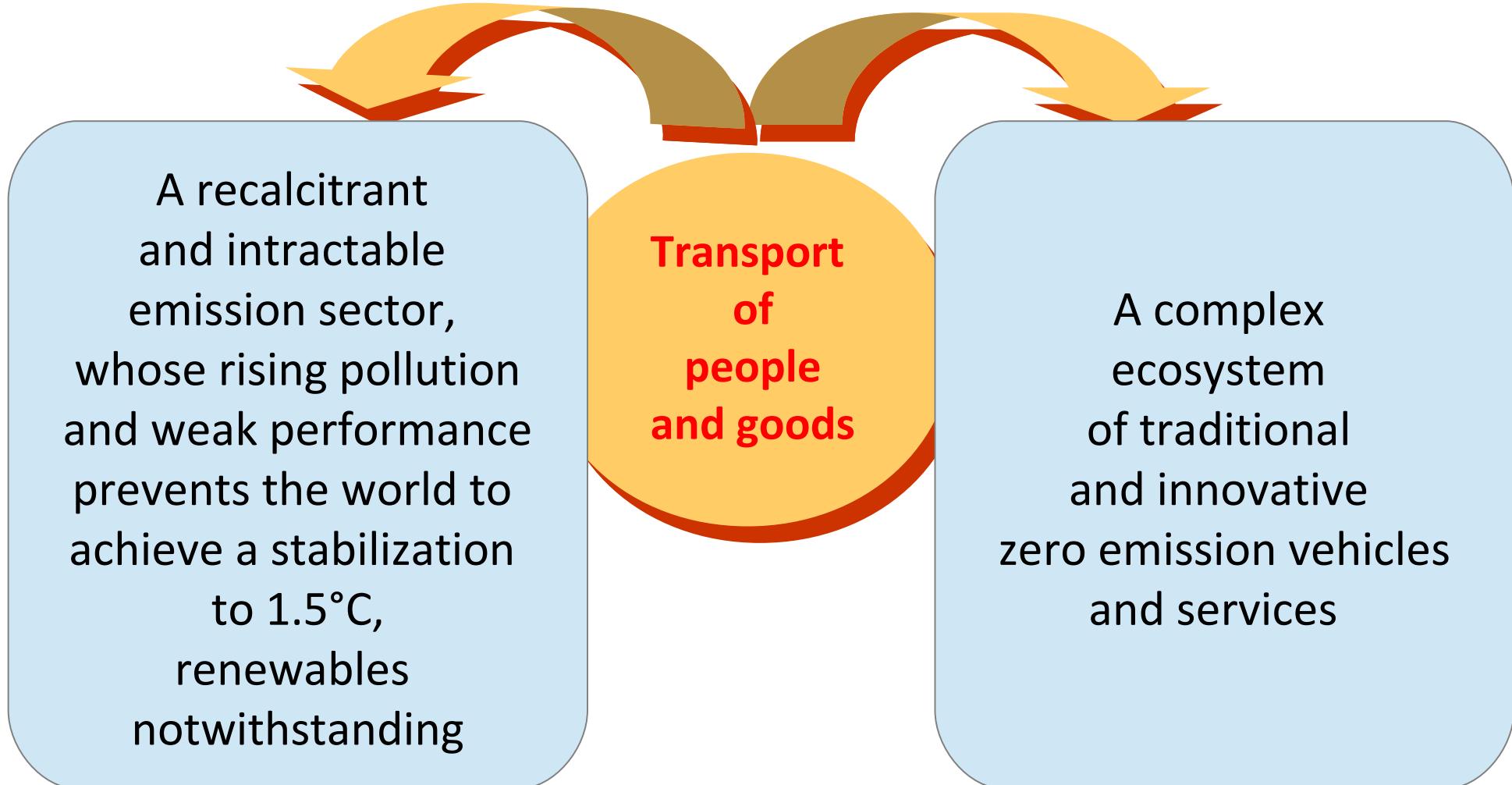
Italian national law
n. 204
on ratification
and full execution
of the Paris Agreement

*Since then, no general or sectoral strategy can
be in contrast with the Paris Agreement*

New National Energy Strategy

Sustainable Mobility Roadmap to 2030

The role of transport



Current objectives of the New Energy Strategy

The current version is hardly in line with EU NDC of 2015 (-40% with respect to 2005) while relying on ETS sectors in an excessive way (Non-ETS: -33%; Transport: -35%).

Emissions 2015 - MtonCO2eq	Minimum expected reduction at 2030 - scenario of intermediate policies	Reduction - at least MtonCO2eq
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Transport	106	22%	23,32
Industry (including energy production)	159	25%	39,75
Buildings	74	18%	13,32
Agriculture and others	16	4%	0,64
Emission source: energy	355	22%	78,1
Non-energy emissions	79	7%	5,53
Total	433	19%	82,27

Source: SEN (version: 12th June 2017), p. 213

For comparisons purpose, between 1990 and 2006 transport emissions rose by 25.67 Mton and fell by 25 Mt between 2008 and 2014.

The current target is not particularly ambitious but we should not rely on a deep GDP and employment crisis to achieve it.

Thus, it already implies quite effective sectoral policies.

A public consultation on the Strategy has been launched

Osservazioni alla proposta di Strategia Energetica Nazionale dell'Italia

**Verso lo scenario di policy avanzate:
occorrono più rinnovabili e
più mobilità elettrica per rendere
meno costoso e stabilizzare il sistema,
messo a rischio dal mix di gas e PV**

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Cutting-edge research
and implementation consulting

Keywords: geopolitica dell'energia, posizionamento competitivo dell'Italia,
danni climatici dal superamento di soglie critiche, politiche a costo zero
per il policy-maker nazionale

12 settembre 2017

Proposte migliorative della migliore SEN degli ultimi anni

Available at
www.accordodiparigi.it/trasporti.htm

90 | mobilità |

Strategia in movimento

di Valentino Piana* e Andrea Poggio**

Sen Trasporti e rispetto dell'Accordo di Parigi.
Come cambiare i trasporti tra nuova Sen
e **Accordo di Parigi**

The immediate next steps

A new version of the Energy strategy
is expected in November 2017.

The Ministry of Economic Development has declared
that for mobility one has to expect incentives
to the purchase of low-emission vehicles,
especially by less wealthy households.

A new Climate strategy
is expected to be elaborate in the next months,
taking into account and updating
all sectoral strategies.

Roadmap to sustainable mobility 2030



Some of the Policy recommendations from the Roadmap, jointly agreed across 45 stakeholders

1

Avoiding mobility through ICT

2

Reducing cognitive and emotional burden
in utilizing public transport, to be cross-platformed
by vectors and service providers

3

Pool-lanes in roads and highways,
enhancing car-pooling ICT-based systems

4

Promoting car-sharing, with fiscal deductibility,
as bonus for vehicle demolition,
providing advantages for Municipalities enacting car-sharing,
including in smaller towns and at condominium-level

Some of the Policy recommendations from the Roadmap, jointly agreed across 45 stakeholders

5

Promoting all alternative fuels, including electricity, gas and hydrogen

6

Enhance electric mobility, with preferential access to the city;
incentivize municipalities to adopt innovative schemes for their cities, own
vehicle fleets, taxi and car-sharing fleets

7

Reducing freight transport on road

8

Optimizing urban logistics, including by cargo-(e-)bike, van-sharing

During the works on the Roadmap, we submitted a “well below 2°C” scenario which likely implies a 43% increase of ambition of “all” NDCs

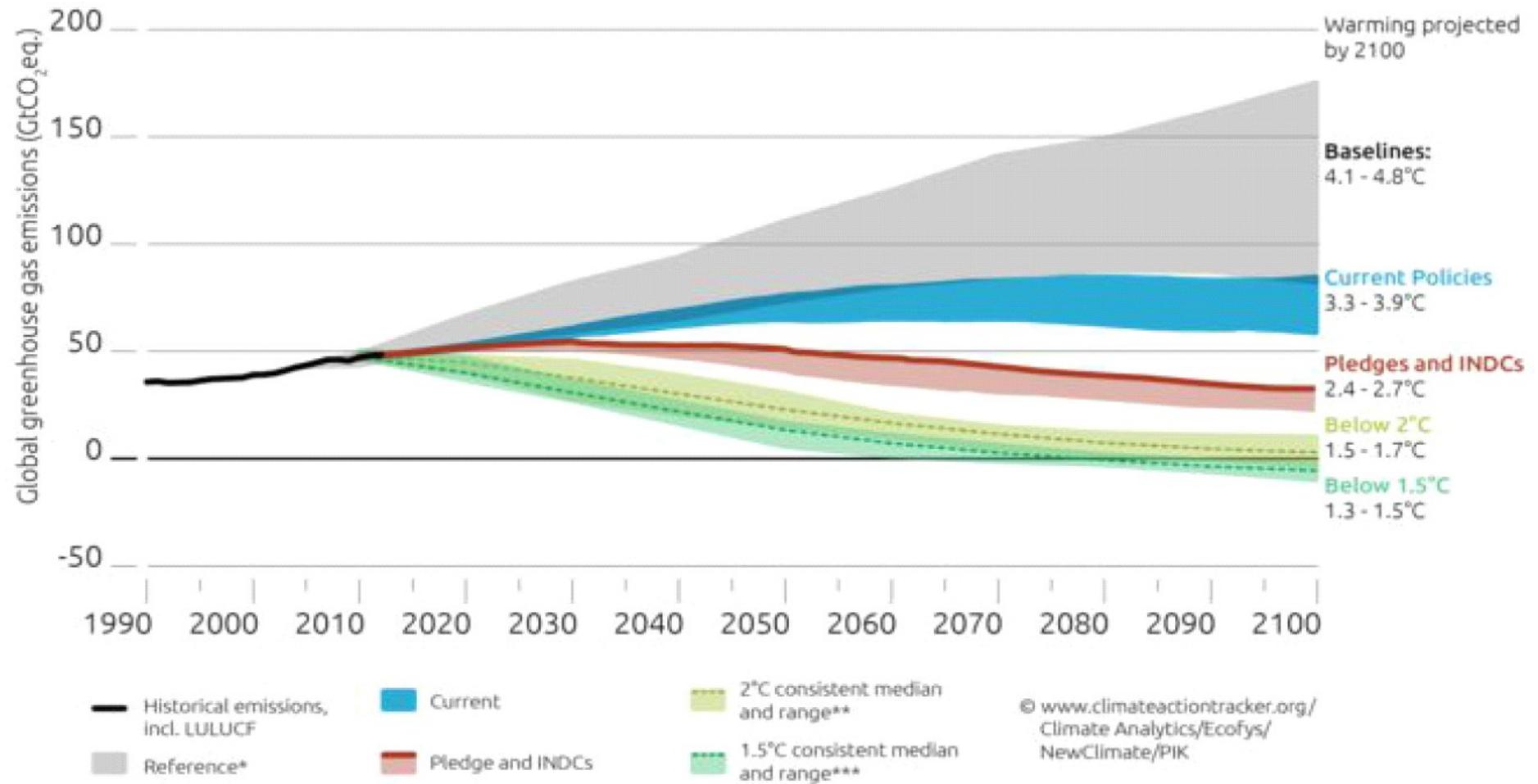


Figura 5: Effetto degli impegni e delle policy correnti sulla temperatura globale (Fonte: <http://climateactiontracker.org/global.html>).

During the works on the Roadmap, we submitted a “1.5°C -consistent scenario” which implies a 86% reduction in CO2 emissions from Italy’s transport sector

TABELLA 1

**Stima del nuovo parco nazionale di veicoli
“decarbonizzati” al 2030, anno del possibile switch-off
dalla trazione fossile (valutazione degli autori).**

Veicoli considerati	2020	2025	2030
Veicoli elettrici leggeri (e-bike, e-scooter, micro)	4.000.000	10.000.000	18.000.000
Automobili e quadricicli	2.000.000	8.000.000	18.000.000
Bus biometano ed elettrici	50.000	100.000	150.000
Treni aggiuntivi (pendolari e merci)	500	1.000	2.000
Trasporto pesante bio-Gnl	50.000	150.000	200.000

Why 1.5°C is crucial

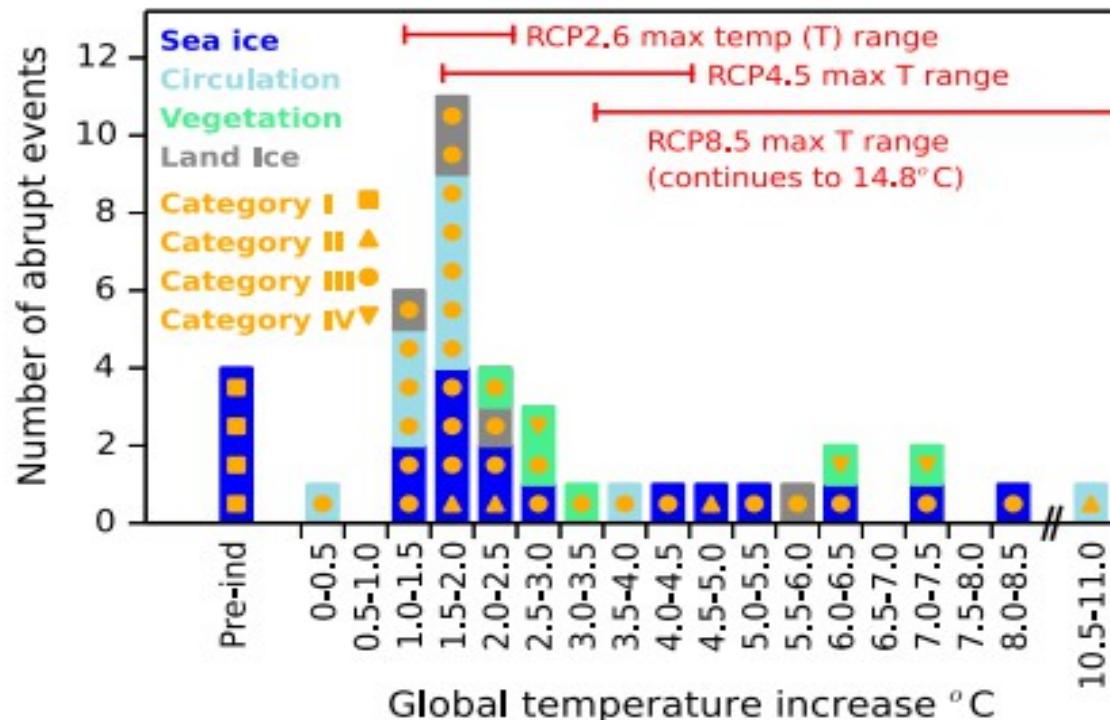


Fig. 4. Abrupt shifts as a function of global temperature increase. Shown are the number of abrupt climate changes occurring in the CMIP5 database for different intervals of warming relative to the preindustrial climate.

37 abrupt shifts in climate system identified in CMIP5 models including biome changes, permafrost loss, ocean circulation changes, sea-ice snow and glacier loss

20% of thresholds of abrupt shifts crossed for 1.5°C compared to 50% at 2°C

Source: Drijfhout, S. et al. Catalogue of abrupt shifts in Intergovernmental Panel on Climate Change climate models. *Proc. Natl. Acad. Sci.* 201511451 (2015); Schleussner Carl-Friedrich, Impacts of 1.5°C warming, IPCC Scoping Meeting August 15 2016.

For Italy see Schleussner, C.-F. et al. Differential climate impacts for policy relevant limits to global warming: the case of 1.5°C and 2°C. *Earth Syst. Dyn.* 7, 327–351 (2016).

My role as IPCC reviewer

SR15_FOD_Chapter1_director.pdf - Adobe Acrobat Professional

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Document for Expert Review

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First Order Draft Chapter 1 IPCC SR1.5

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3 **Chapter 1: Framing and Context**

4

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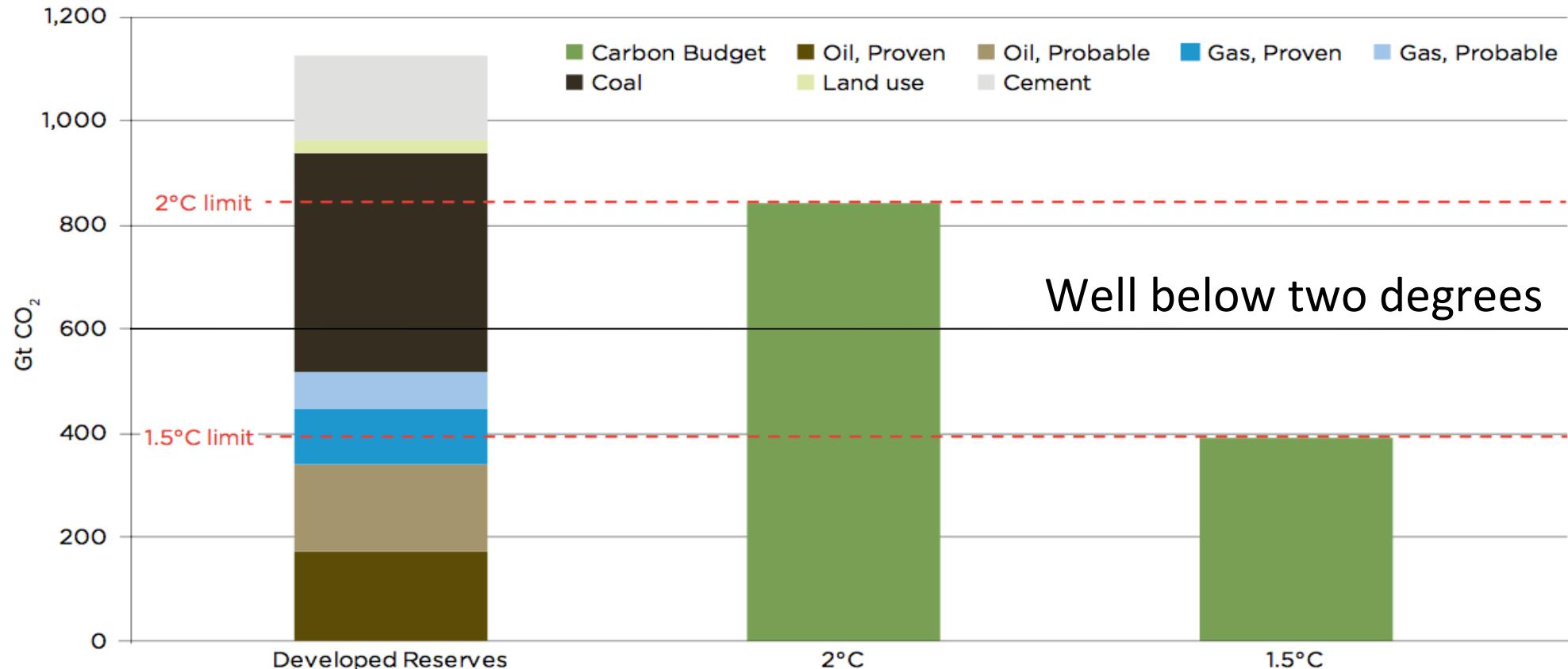
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18 **Notes:**

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Implication of the 1.5°C carbon budget for fossil fuel utilization

Figure ES-1: Emissions from Developed Fossil Fuel Reserves, Plus Projected Land Use and Cement Manufacture



Sources: Rystad Energy, International Energy Agency (IEA), World Energy Council, Intergovernmental Panel on Climate Change (IPCC)

Source: Christophe McGlade1 & Paul Ekins, The geographical distribution of fossil fuels unused when limiting global warming to 2 degrees

<https://www.nature.com/articles/doi:10.1038/nature14016>

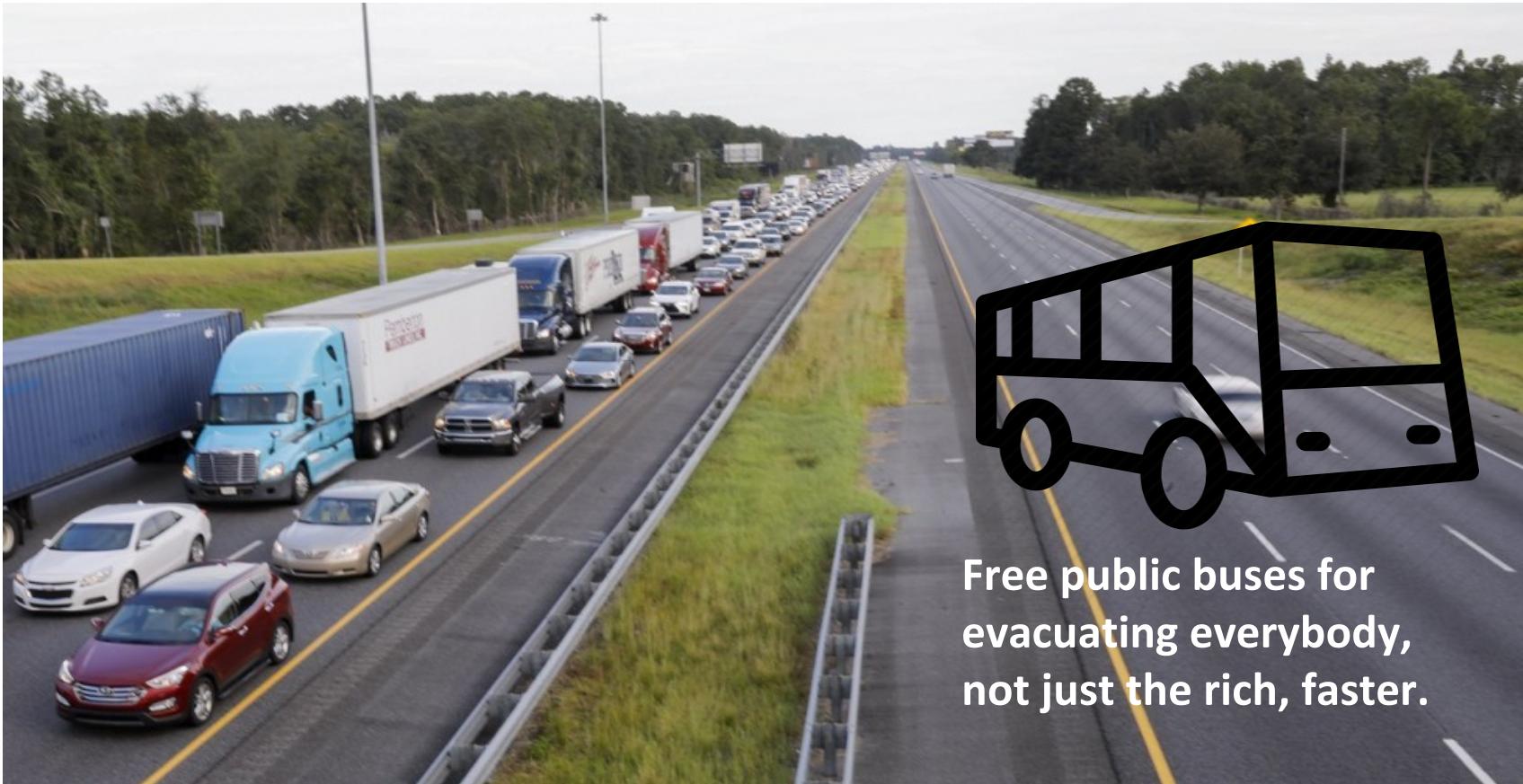
Our addition: the well below curve

A few of the 1.5°C -consistent scenario policies we proposed, not included in the joint recommendations

-  1 Target a much lower motorization rate
-  2 A much larger number of tools for electric mobility,
including bonus-malus schemes
(e.g. charging points in gas stations, taxi licensing),
mandatory requirements for 4 stars-hotels (charging points)
-  3 Increasing the “bollo auto” on second and further cars in the families,
graduated according to GHG emissions, thus free for electric vehicles
-  4 Exclude natural gas from incentivization, while
boosting bio-methane in public transport
-  4 Switch off from diesel in sales
(2022 for commercial vehicles, 2025 for cars)
and in cities (max 10 year after the Euro class reference year)

An example of the advantages of a new mobility

Cars stuck in a queue to escape Irma Hurricane



Source: EPA

<http://www.scmp.com/news/world/united-states-canada/article/2110273/traffic-nightmare-500000-floridians-flee-irma>

**Thank you for attention
and available to discuss further
common steps**

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