



COORDINADOR
ELÉCTRICO NACIONAL

MEGATENDENCIAS EN ENERGÍA

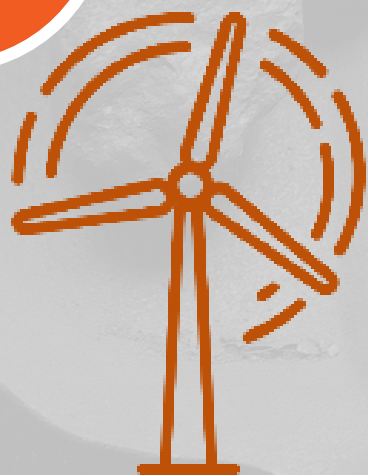
Juan Carlos Olmedo
Mayo 2019



EL DESARROLLO ENERGÉTICO PLANTEA GRANDES DESAFÍOS



1



DESCARBONIZACIÓN



2035 CONSUMO
COMBUSTIBLES DEJARÍA
DE CRECER



REDUCCIÓN DEL CRECIMIENTO DE LA DEMANDA DE PETRÓLEO 2030





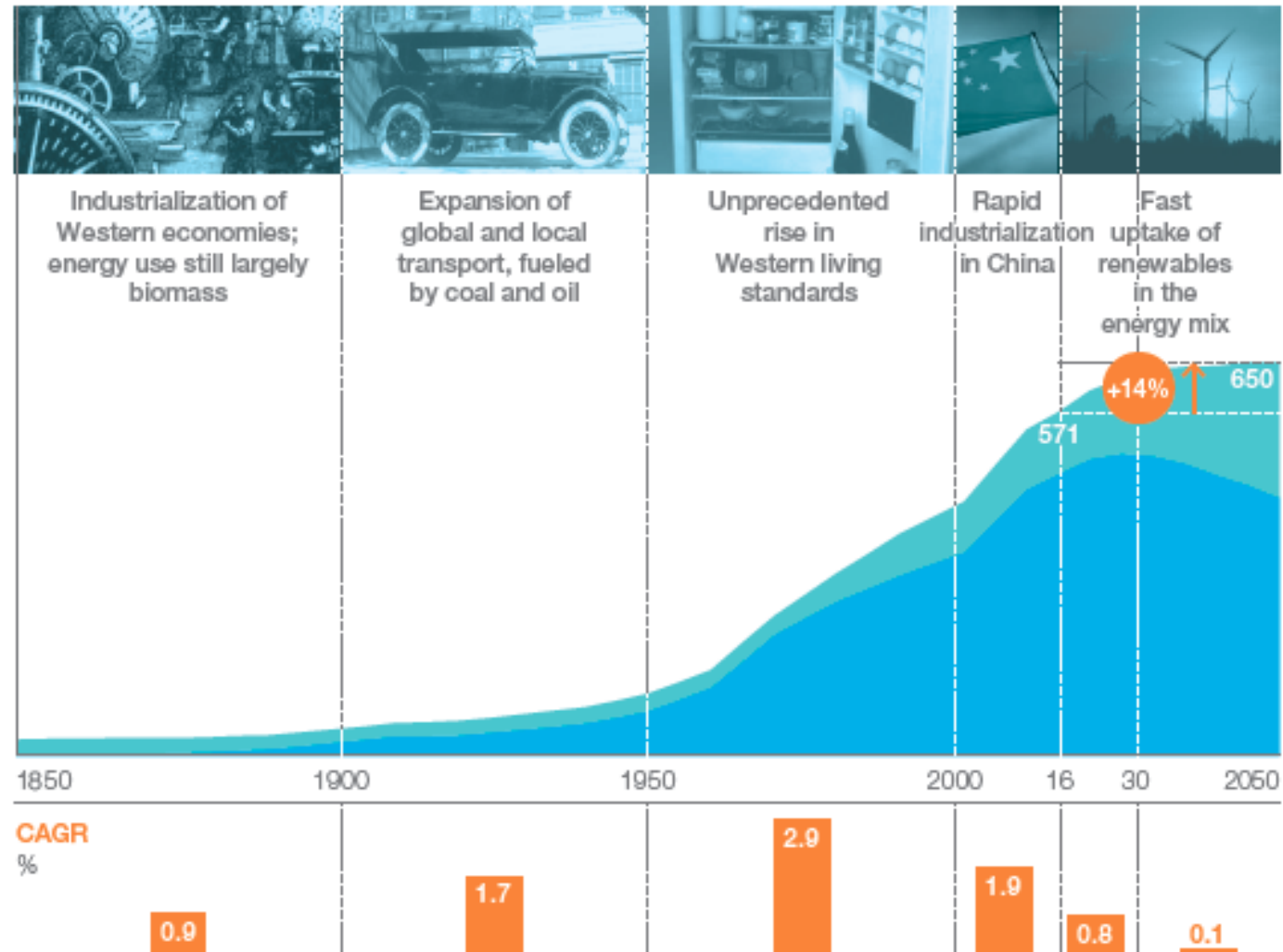
CAMBIO EN LA FORMA DE GENERAR LA ENERGÍA



Global primary energy demand

Million terajoules (TJ)

Renewables Fossil fuels



Source: McKinsey Energy Insights' Global Energy Perspective, January 2019; IEA Energy Balances (Historical); Smil, V. (Historical)

2 AUMENTO DEL CONSUMO ELÉCTRICO



Final energy consumption

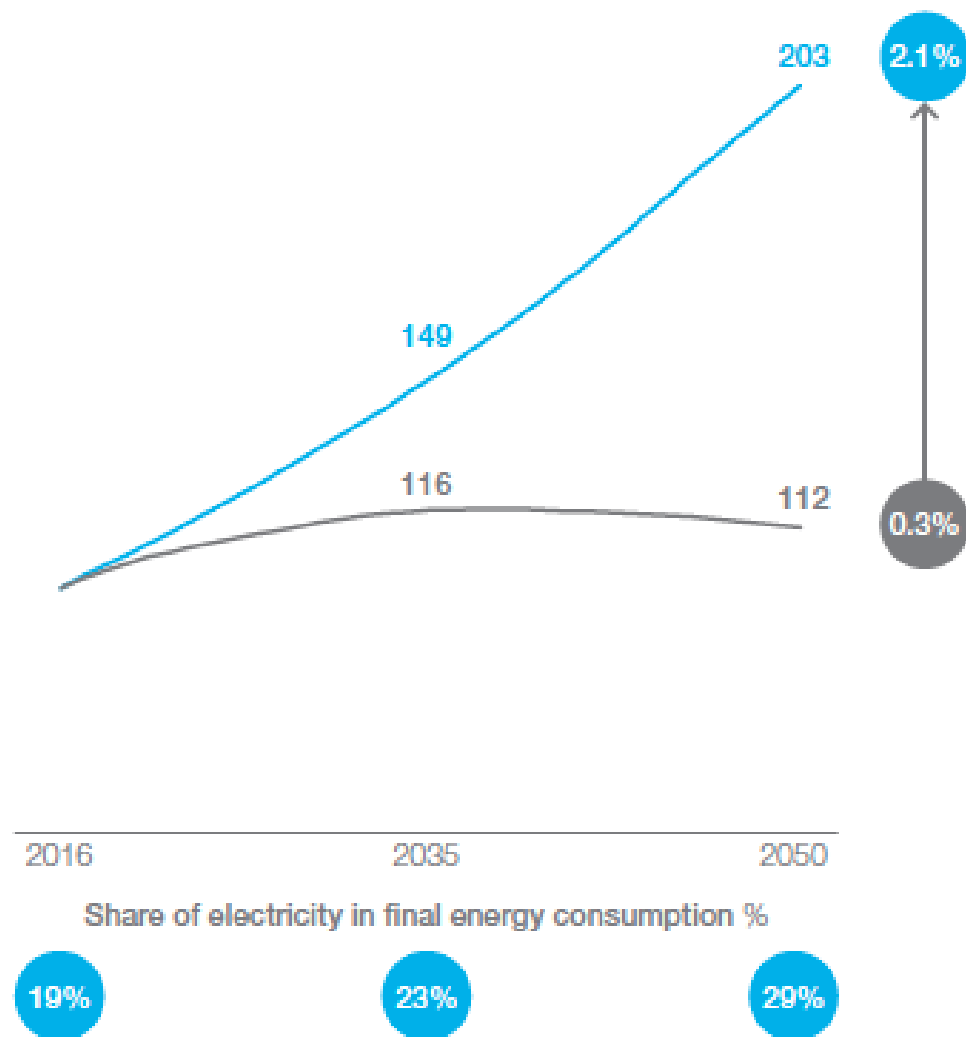
2016=100

— Electricity — Other fuels

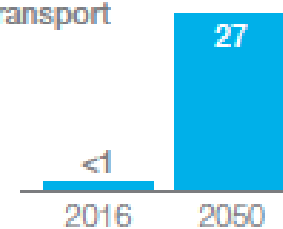
CAGR %

Electrification¹

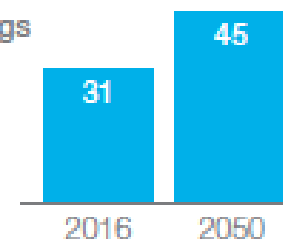
% of final energy consumption



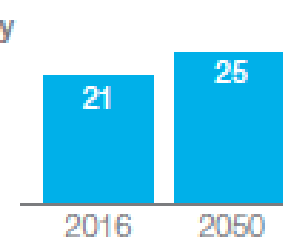
Road transport



Buildings



Industry



2016 2035 2050

Share of electricity in final energy consumption %

19%

23%

29%

¹ Buildings includes residential buildings in OECD Europe and OECD Americas; transport includes passenger cars, trucks, vans, buses, and 2- and 3-wheelers

Source: McKinsey Energy Insights' Global Energy Perspective, January 2019

• DUPLICACIÓN DEL CONSUMO ELÉCTRICO

50%



2035

2050



FULL ELECTRIC



Smart gateway and camera



Cylincam

Environment Monitor/Camera/Gateway



Smart Switch

Stylish design, energy saving



Window Opener

Open or close the window freely



Smart Retina Doorlock

Multiple ways for door unlocking



Dream Flower

A multifunctional vase



3



RELEVANCIA
GAS

 **ÚNICO
COMBUSTIBLE FÓSIL
CUYO CONSUMO
SEGUIRÁ EN AUMENTO**

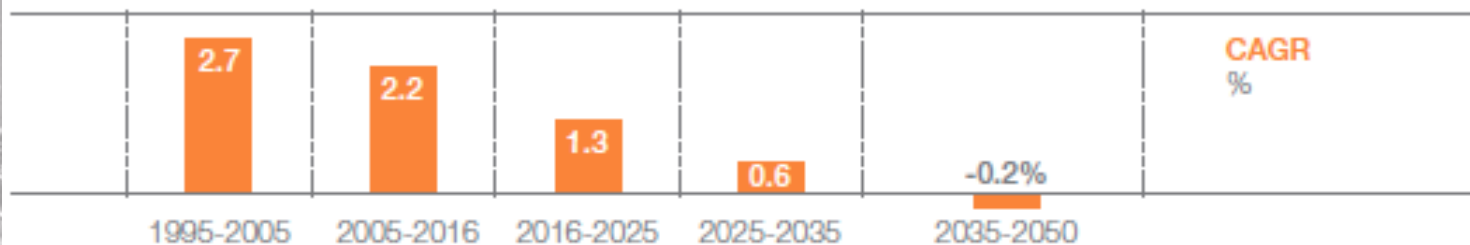
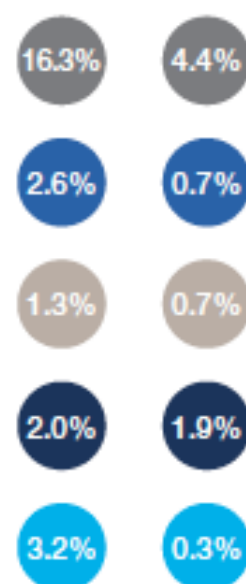
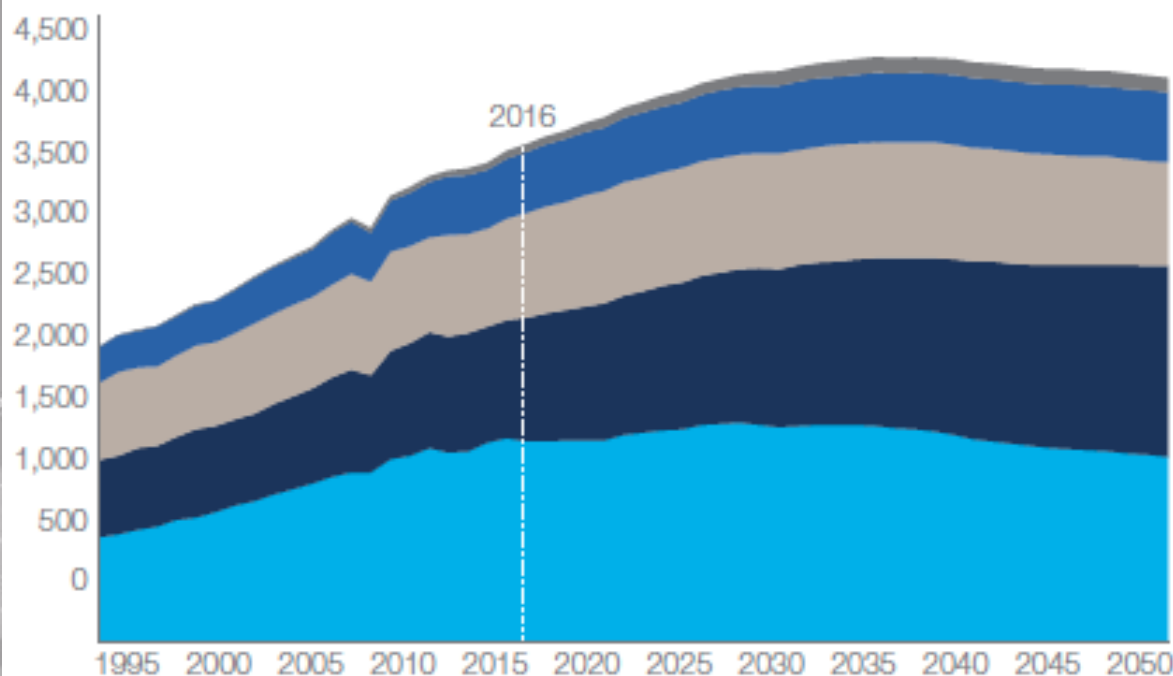
Natural gas demand by segment¹

bcm

■ Transport ■ O&G industry own use ■ Buildings ■ Industry ■ Power

1995-16
CAGR %

2016-35
CAGR %



¹ Transport segment in many other reports also includes gas use for pipeline transport. This is included in oil and gas industry's own use above (73 bcm in 2016) Source: McKinsey Energy Insights' Global Energy Perspective, January 2019

4



CAMBIO CLIMÁTICO

REDUCCIÓN EMISIONES
DE CO2 POR BAJA
DEMANDA DE CARBÓN

Coal demand by region

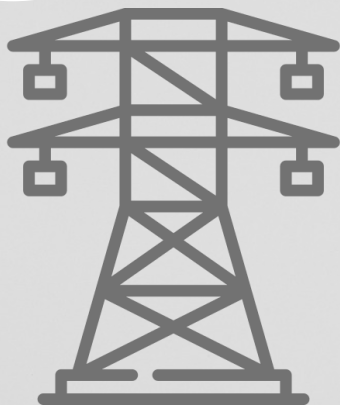
Million TJ



Source: McKinsey Energy Insights' Global Energy Perspective, January 2019

5

MÁS TRANSMISIÓN



Y DISTRIBUCIÓN

 **NUEVAS LÍNEAS DE
TRANSMISIÓN PARA
TRANSPORTAR MAYOR
CONSUMO**



FORTALECER LA DISTRIBUCIÓN DE CARA AL CONSUMIDOR







COORDINADOR
ELÉCTRICO NACIONAL

MUCHAS GRACIAS