



# Oil and gas in the Global Energy Transition

The strategies of International Oil and Gas Companies in the energy transition

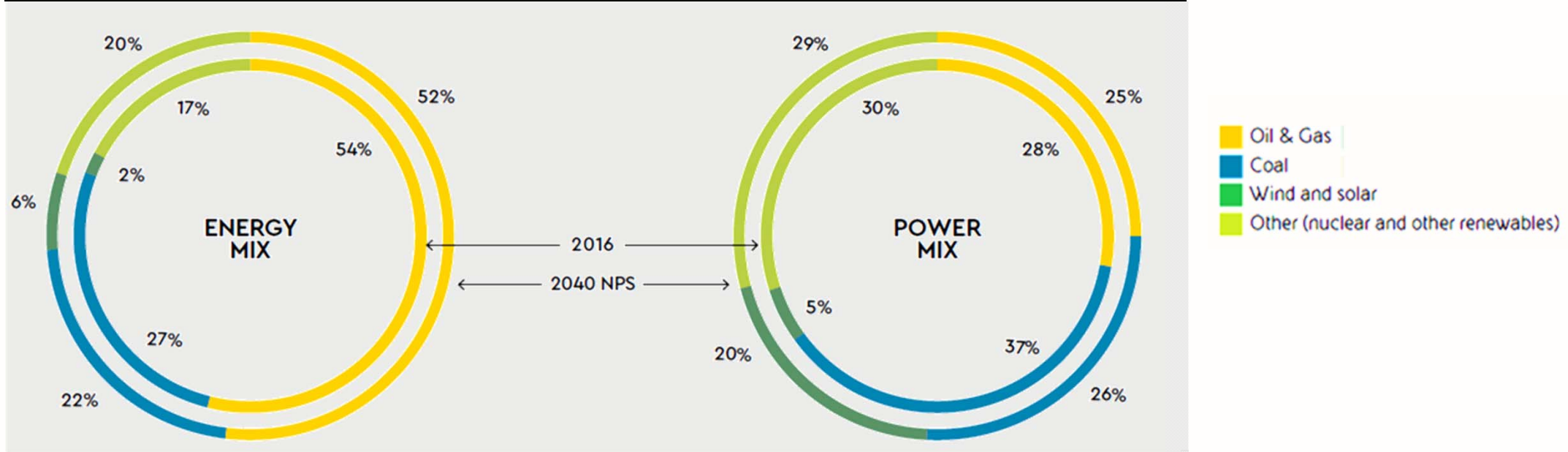
**Lapo Pistelli**

*Executive Vice President International Affairs Eni*

7<sup>th</sup> European Energy Forum WEC FRANCE | PARIS | 7-8 June 2018

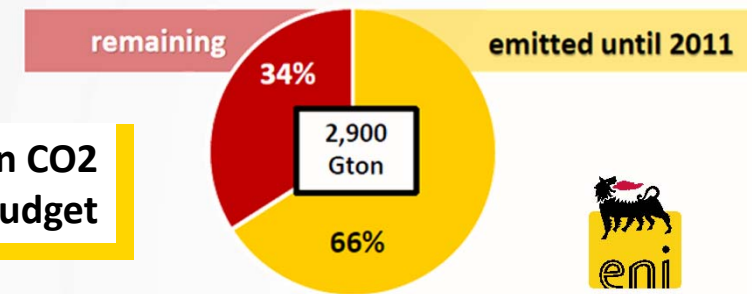
# The energy transition process

## Evolution of the Energy and Electricity Mix to 2040 | %

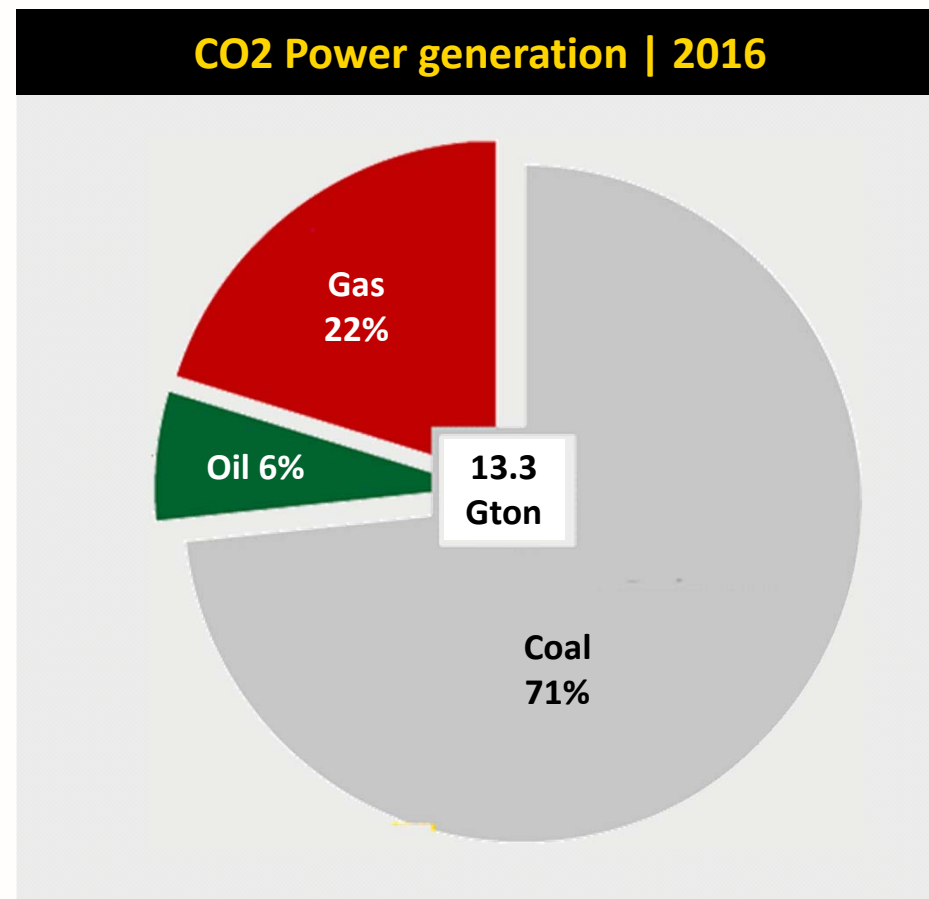
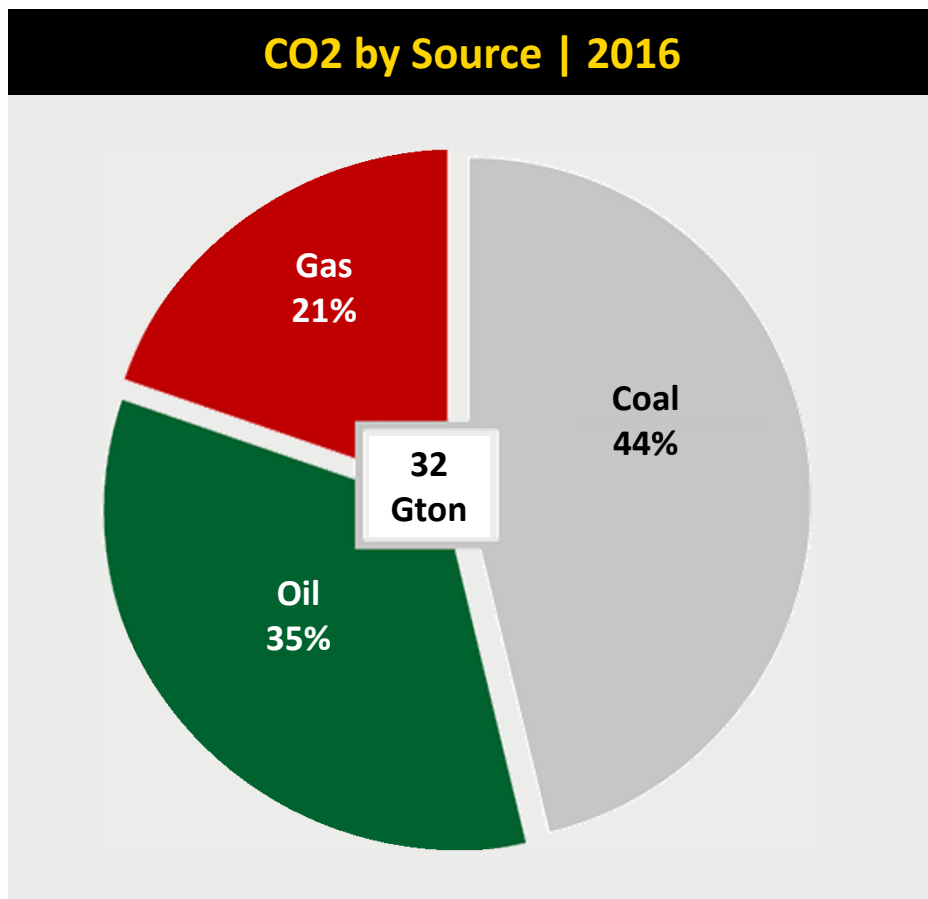


Source: IEA WEO 2017 New Policies Scenario

Carbon budget | Gton CO2  
2°C Carbon Budget



# CO2 Emissions in the Energy Sector



Source: IEA WEO 2017 New Policies Scenario



# The main challenge for the Energy Industry

## POPULATION GROWTH



**+23%**

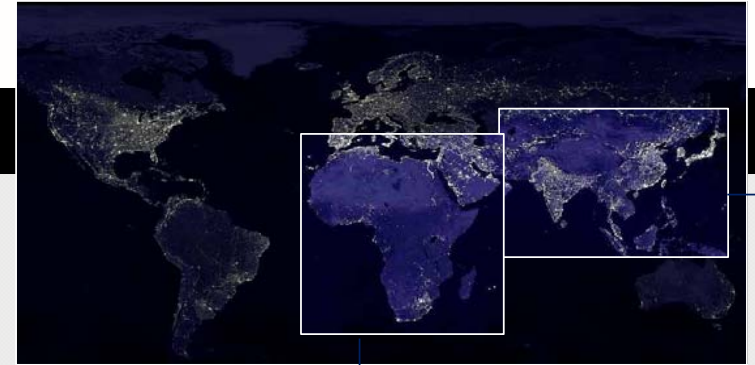
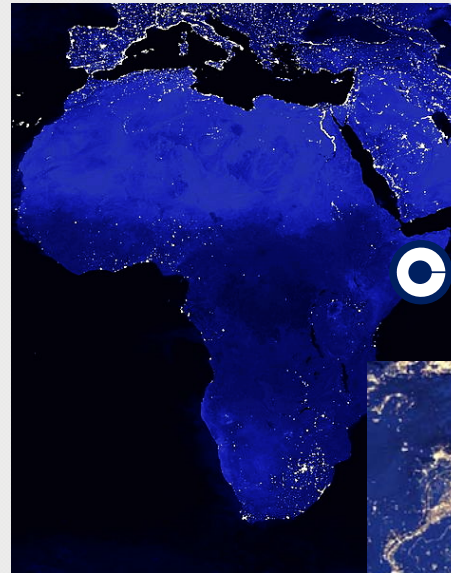
World 2016 vs 2040



**+70%**

Africa 2016 vs 2040

## ACCESS TO ENERGY



## Eni's integrated strategy for energy transition



**REDUCING  
EMISSIONS**



**LOW CARBON  
PORFOLIO &  
GAS ADVOCACY**



**RENEWABLES  
&  
GREEN BUSINESS**



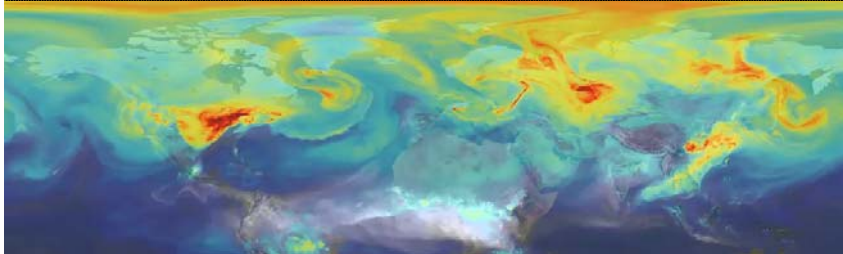
**COMMITMENT  
TO R&D**

**A comprehensive decarbonisation policy is a key lever  
for long-term sustainability of O&G business**



# Reducing Emissions

## CARBON FOOTPRINT REDUCTION

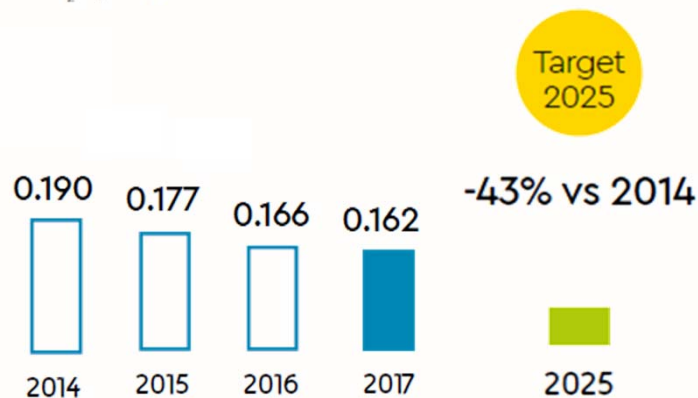


Investing over € 550 mln in Eni Plan, we target to achieve by **2025**:

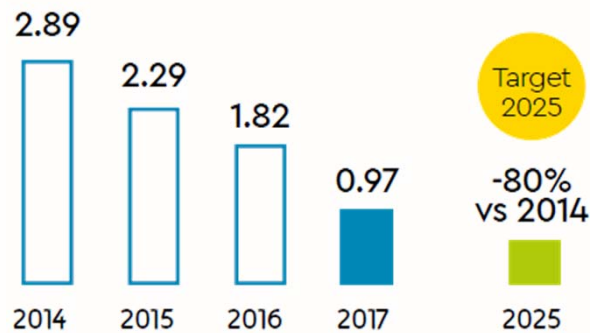
- **Zero** routine gas flaring
- **-80%** fugitive methane emissions vs 2014
- **-43%** upstream direct emissions vs 2014

## UPSTREAM GHG EMISSIONS | tCO<sub>2</sub>eq/toe

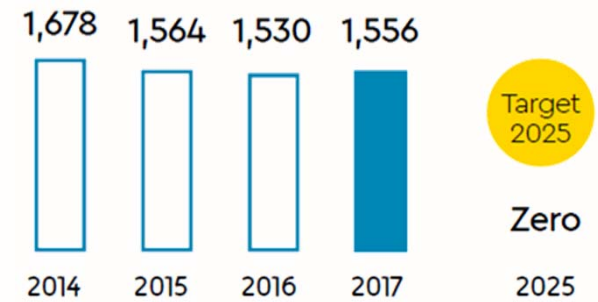
UPSTREAM GHG EMISSION INTENSITY  
(tCO<sub>2</sub>eq/toe)



UPSTREAM FUGITIVE METHANE EMISSIONS  
(MtCO<sub>2</sub>eq)



VOLUME OF HYDROCARBONS SENT TO PROCESS FLARING  
(MSm<sup>3</sup>)



# Low Carbon Portfolio & Gas Advocacy

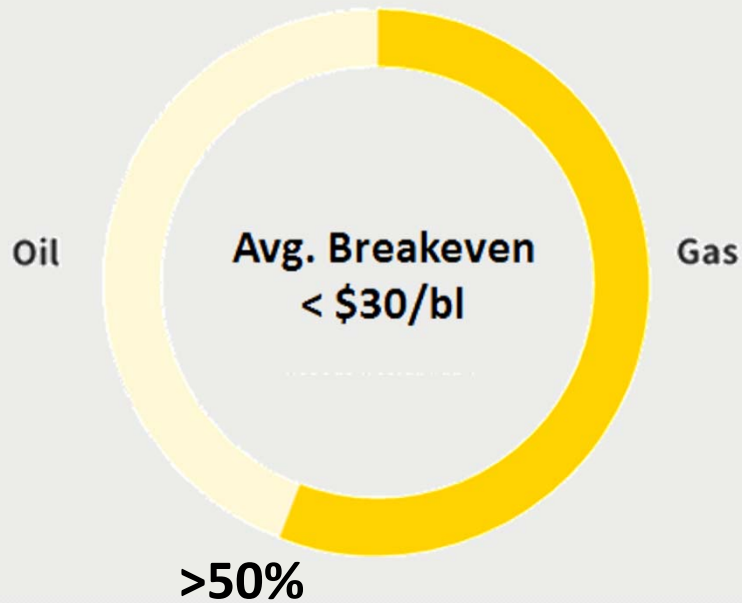
## LOW-CARBON AND RESILIENT O&G PORTFOLIO

- Break-even for new upstream ongoing projects <30 \$/boe
- Resilient at low carbon scenario IEA SDS
- Gas resources >50%

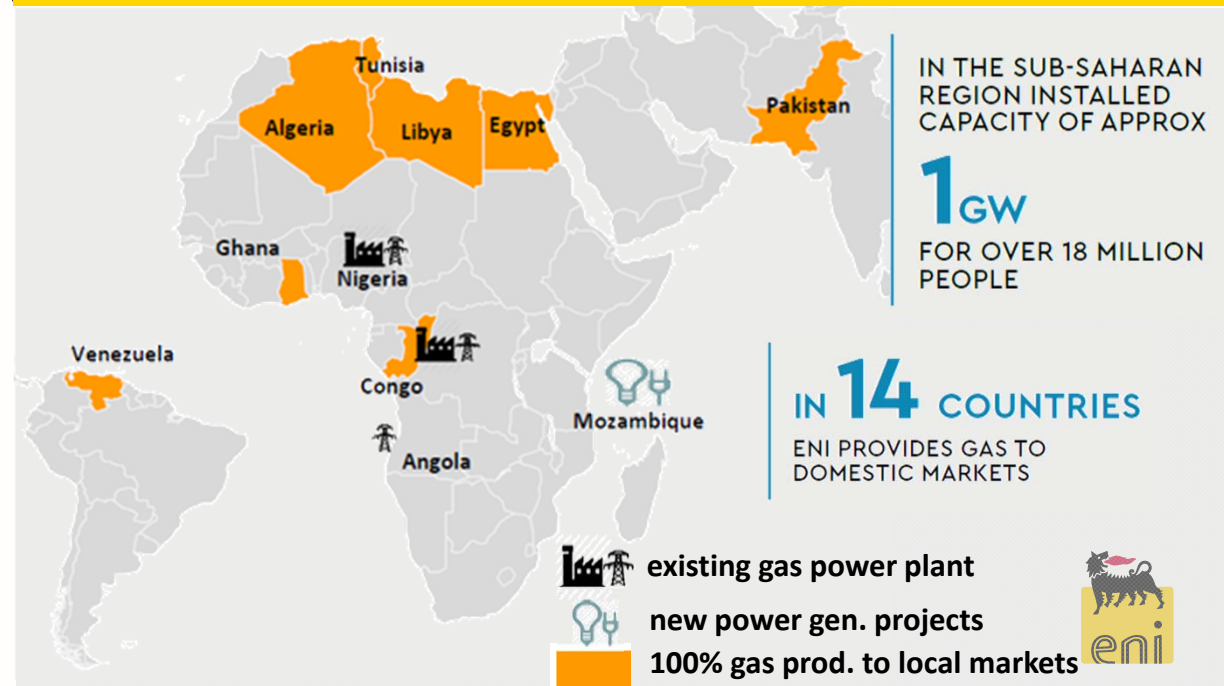
## GAS ADVOCACY



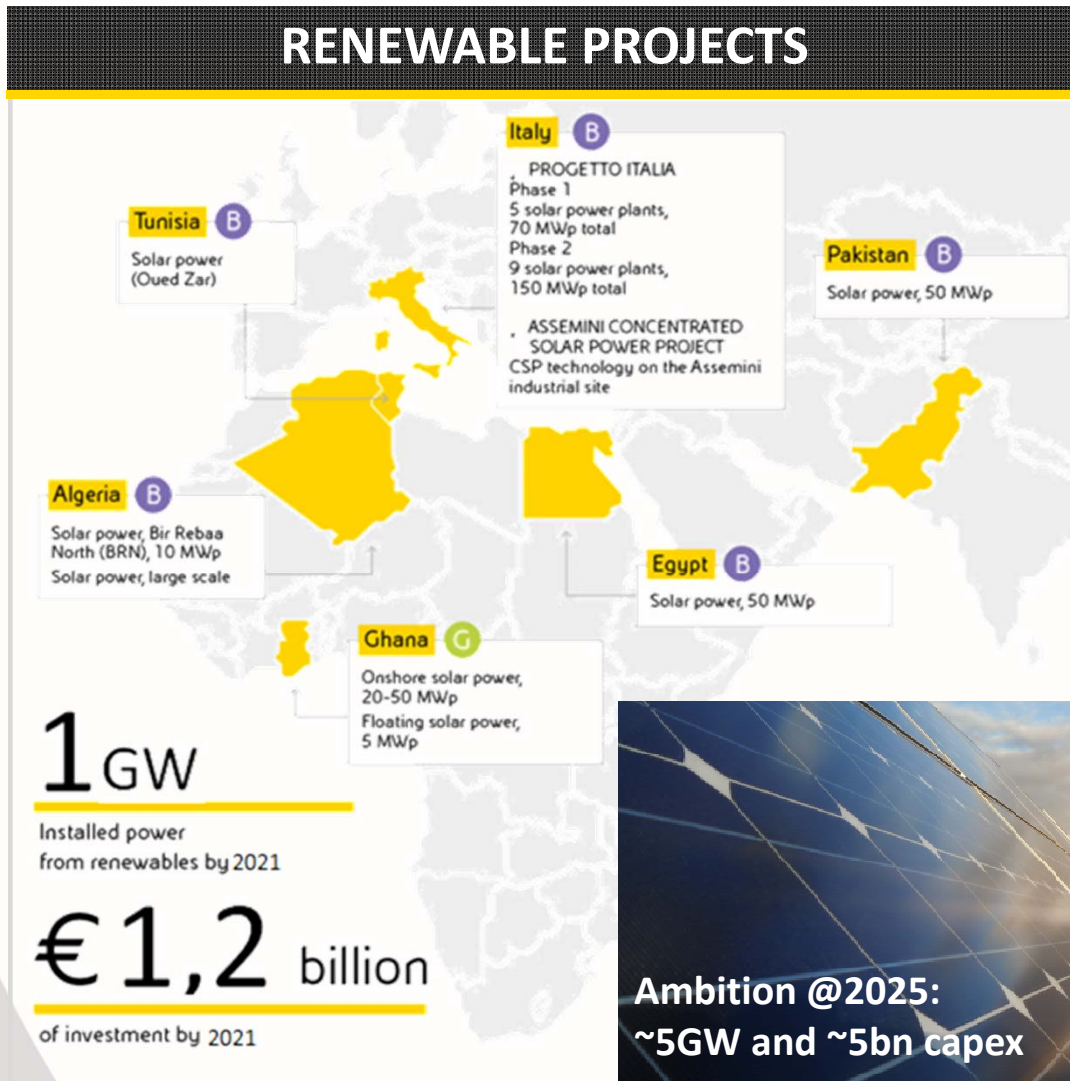
## OIL & GAS RESOURCES | %



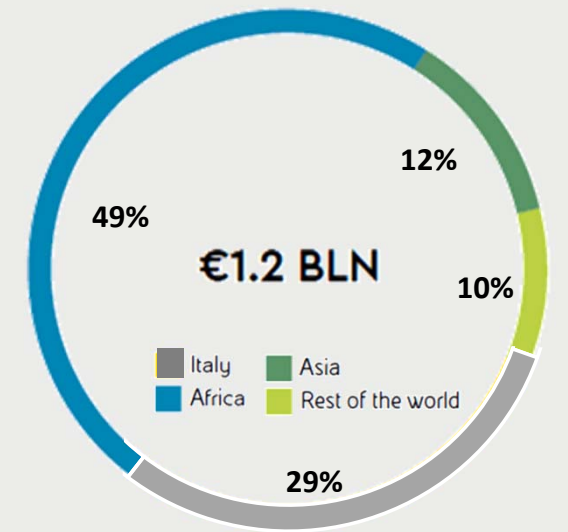
## GAS TO POWER TO IMPROVE ACCESS TO ENERGY



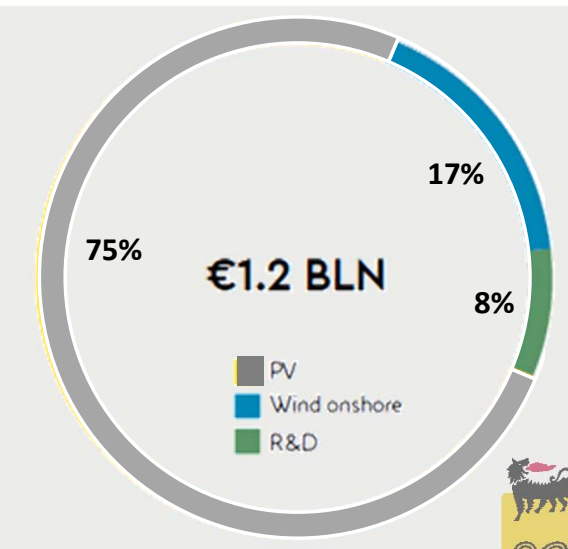
# Renewables



## INVESTMENTS BY GEOGRAPHIC AREA



## INVESTMENTS BY TYPE





# Green Business

## GREEN REFINERY



- Green conversion
- Proprietary technology licensing
- Feedstock flexibility
- Biofuels production

## GREEN CHEMISTRY



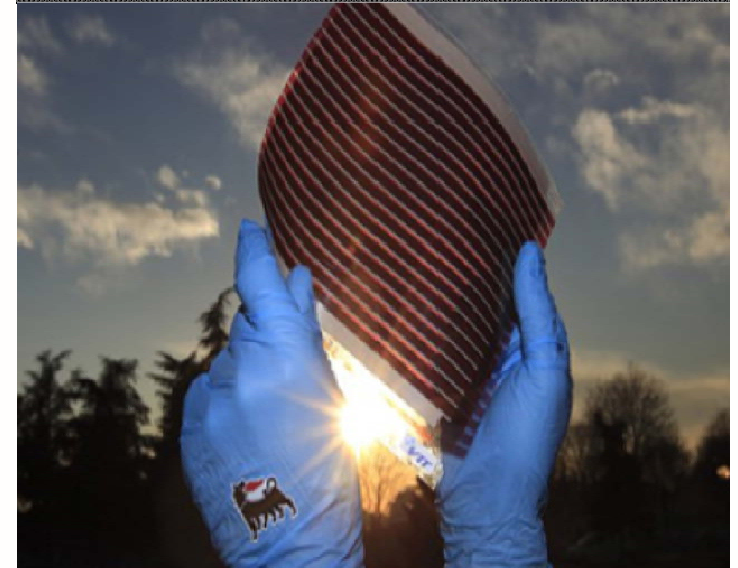
- New products development
- New industrial platforms from renewable sources
- Strengthening international presence

# Commitment to Research and Development

## RESEARCH PARTNERSHIPS



## ENI'S R&D



In the last ten years, Eni research focused on Renewable Energies (Solar and Biomass) and Environmental Protection and Recovery, and obtained **over 180 proprietary inventions** covered by more than **500 patents** in Italy and worldwide plus **over 750 scientific papers**.

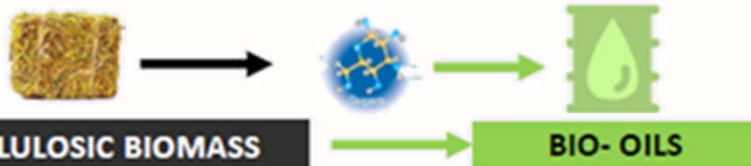




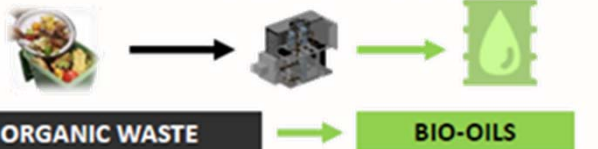
# New Emerging Trends: Technological Innovation and Digitalization

## DEVELOPMENT OF INNOVATIVE TECHNOLOGIES LEVERAGING ON ENI'S R&D PROPRIETARY SOLUTIONS

### OILS FROM BIOMASS



### BIO-OILS FROM WASTE



BIO-REFINERY

GREEN CHEMICALS

REMEDIATION

RENEWABLES



# Back-up

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## A distinctive business model

### ENERGY SOLUTIONS: AN INTEGRATED MODEL

- ✓ Synergies with Eni assets and activities
- ✓ International expansion in Eni Countries
- ✓ Solar, Wind and Hybrid Technologies
- ✓ R&D Deployment

