



**Access to energy: how to meet local needs  
and to address global challenges**

***Sabina Ratti – Sustainability Vice President eni S.p.A.***

**Milan, May 20, 2011**

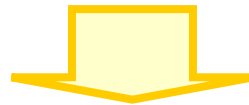
**eni.com**

## **energy poverty: the need for a common strategy**

---

**Energy poverty is amongst the largest challenges the world faces today.**

- **More than 1.4 billion people lack access to electricity.**
- **More than 2.6 billion people rely on traditional biomass.**
- **About 3 billion people access unreliable energy networks.**
- **If no action is taken, the number of people without energy will grow dramatically in the next few years.**



**About 100% of those people in developing and least developed countries**

## energy poverty: the “missing challenge”

---

During the last 20 years, not so much attention was paid to this enormous issue in the international debate:

- energy was not addressed in Agenda 21 (1992);
- some discussions on unsustainable energy consumption and on transport-related pollution was part of the Second and Third Sessions of the Commission on Sustainable Development (CSD);
- The first official mention of energy for sustainable development was made by the General Assembly in 1997, at its 19<sup>th</sup> Special Session (Rio+5).

In 2000, access to sustainable and affordable energy wasn't listed as an MDG nor ever addressed in the Millennium Summit outcome, the Millennium Declaration. Many started to define it as the “Missing MDG”.

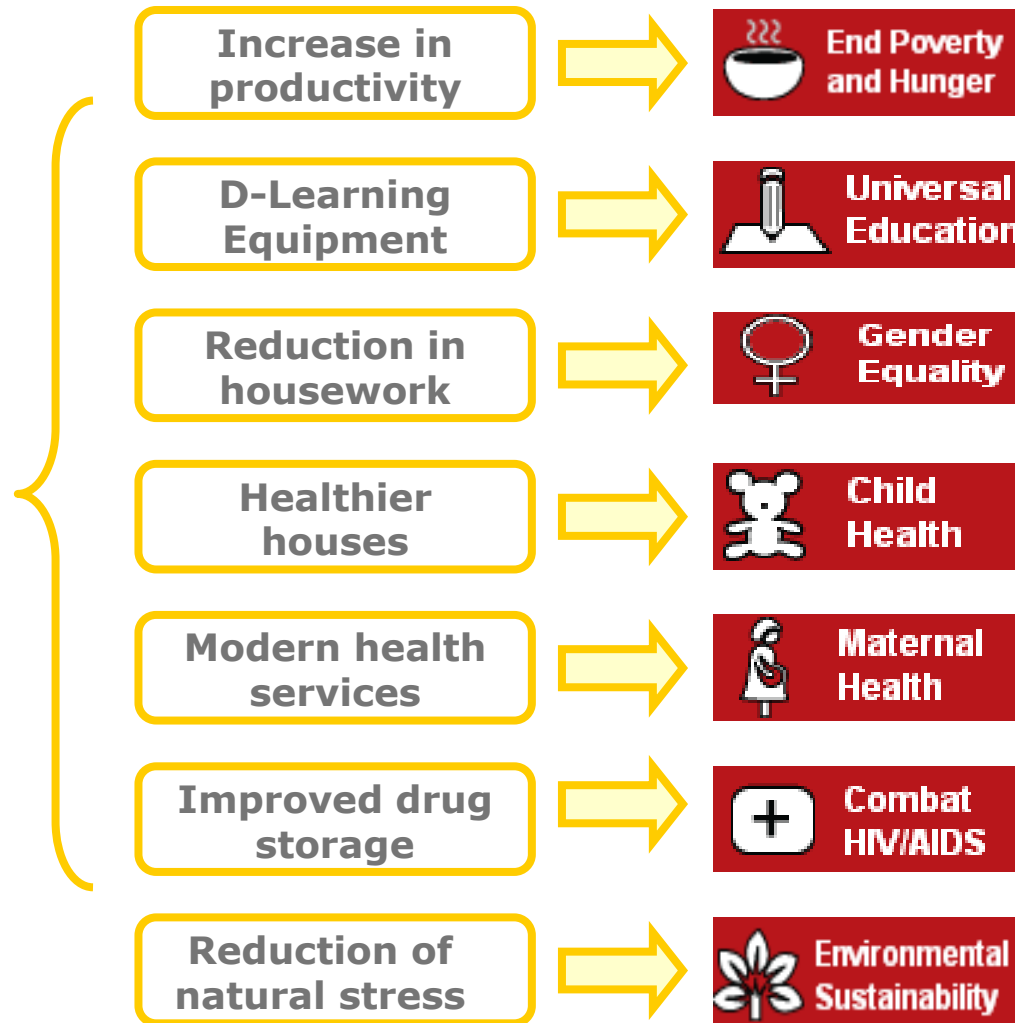


# energy access & development impact

What was still difficult to understand was how much improving energy access underpins development and contributes to all the MDGs



Access to sustainable energy...



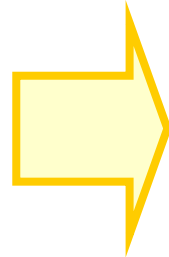
## an example: energy access & MDG1

---

- **Increased access to electricity enables the agriculture value chain therefore improving food security.**



Access to sustainable energy...



- **Increases work productivity**
- **Extends use of machineries**
- **Allow betters preservation and processing of agriculture products**
- **Betters irrigation systems**

## an example: energy access & MDG3

- Increased access to electricity better women's living conditions and unleashes their potential



Access to sustainable energy...

Diminishes time consuming activities hard house work

- fuel, water & food collection
- cooking and food processing
- heating

Diminishes health & safety risks connected to

- indoor air pollution caused by cooking with unsafe fuels
- long term fatigue & violence

Frees up time for

- Education
- Salary related activities
- Political participation

Increases

- domestic health
- domestic safety
- protection against rapes & public safety



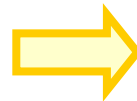
eni

## **energy poverty: the need for a common strategy**

---

A new consciousness about the links between energy and development raised during the Johannesburg Conference on Sustainable Development, in 2002.

**2012: UN International Year of Sustainable Energy for All**



**Triggering global cooperation**

**2011: UN Private Sector Forum**



**Developing common strategies**

**2012: UNCSD (Rio + 20)**



**Shaping the new world sustainable energy**

**Neither the private, nor the public sector can address energy poverty alone**



eni

# eni's short profile

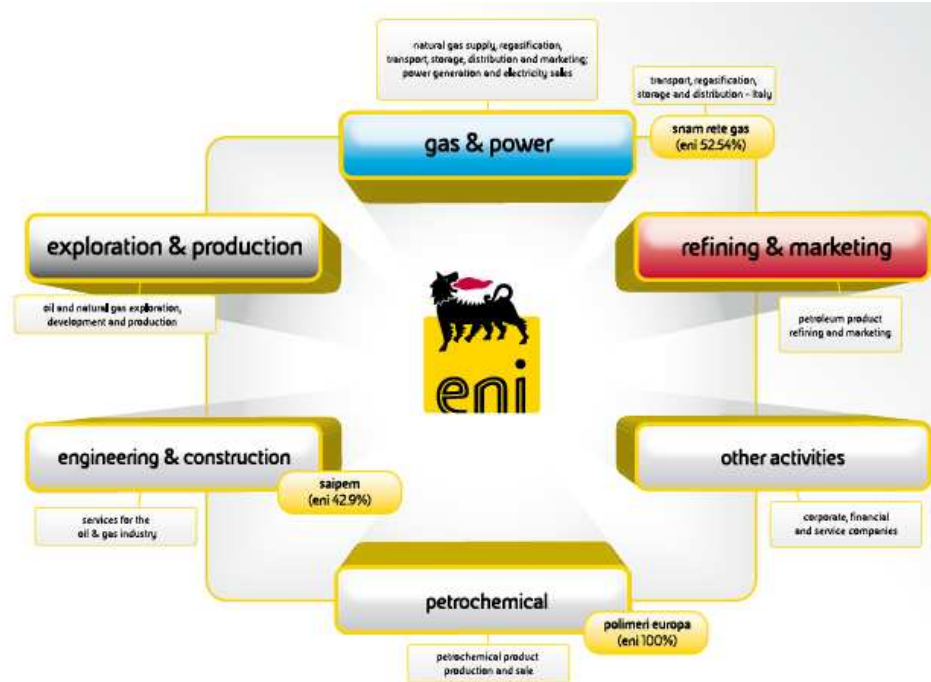
We are a major integrated energy company, committed to growth in the activities of finding, producing, transporting, transforming and marketing oil and gas. **eni** men and women have a passion for challenges, continuous improvement, excellence and particularly value people, the environment and integrity.

## RESULTS 2010:

- **Adjusted net profit for the year:** € 6.87 (+32%)
- **People employed:** about 80,000
- **Operating countries:** 79



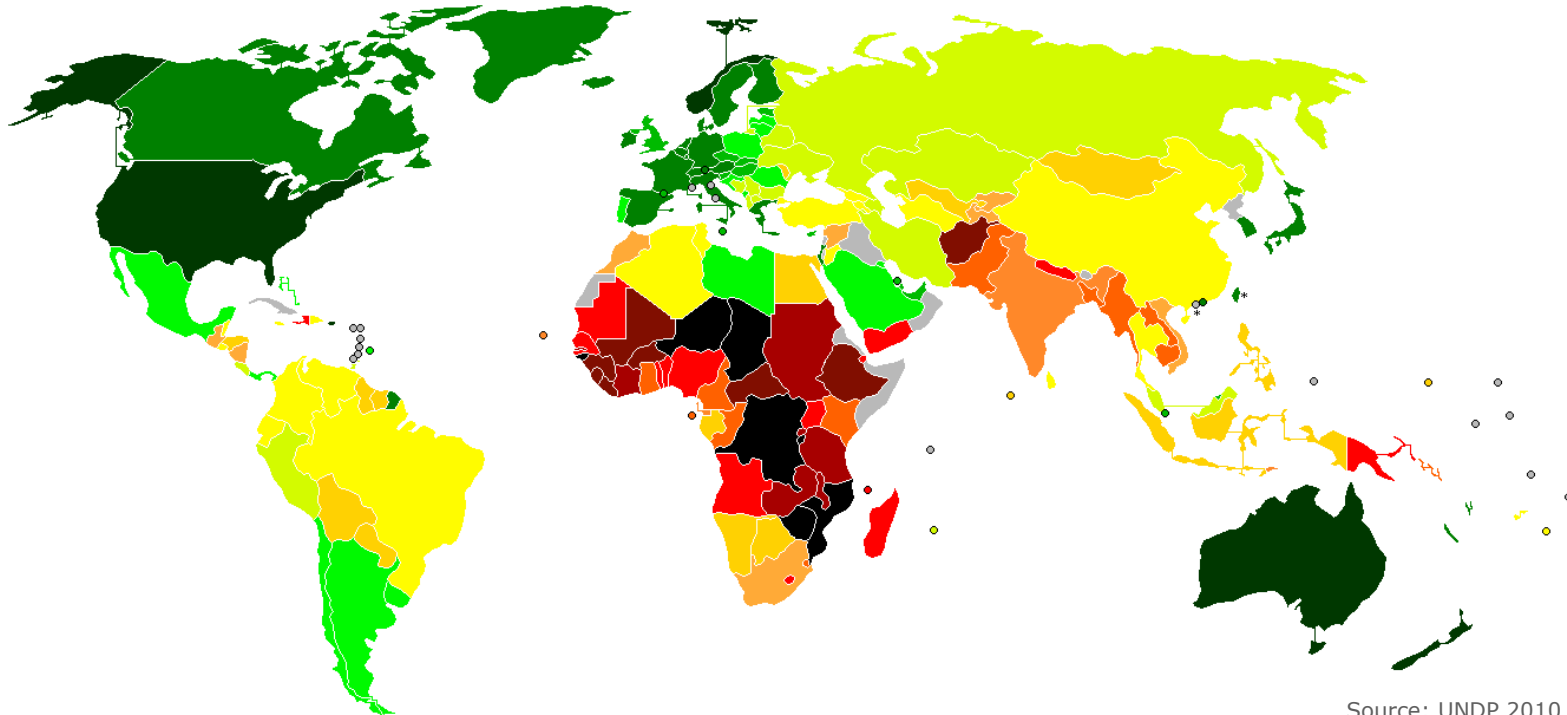
FTSE4Good





## eni in developing countries

---

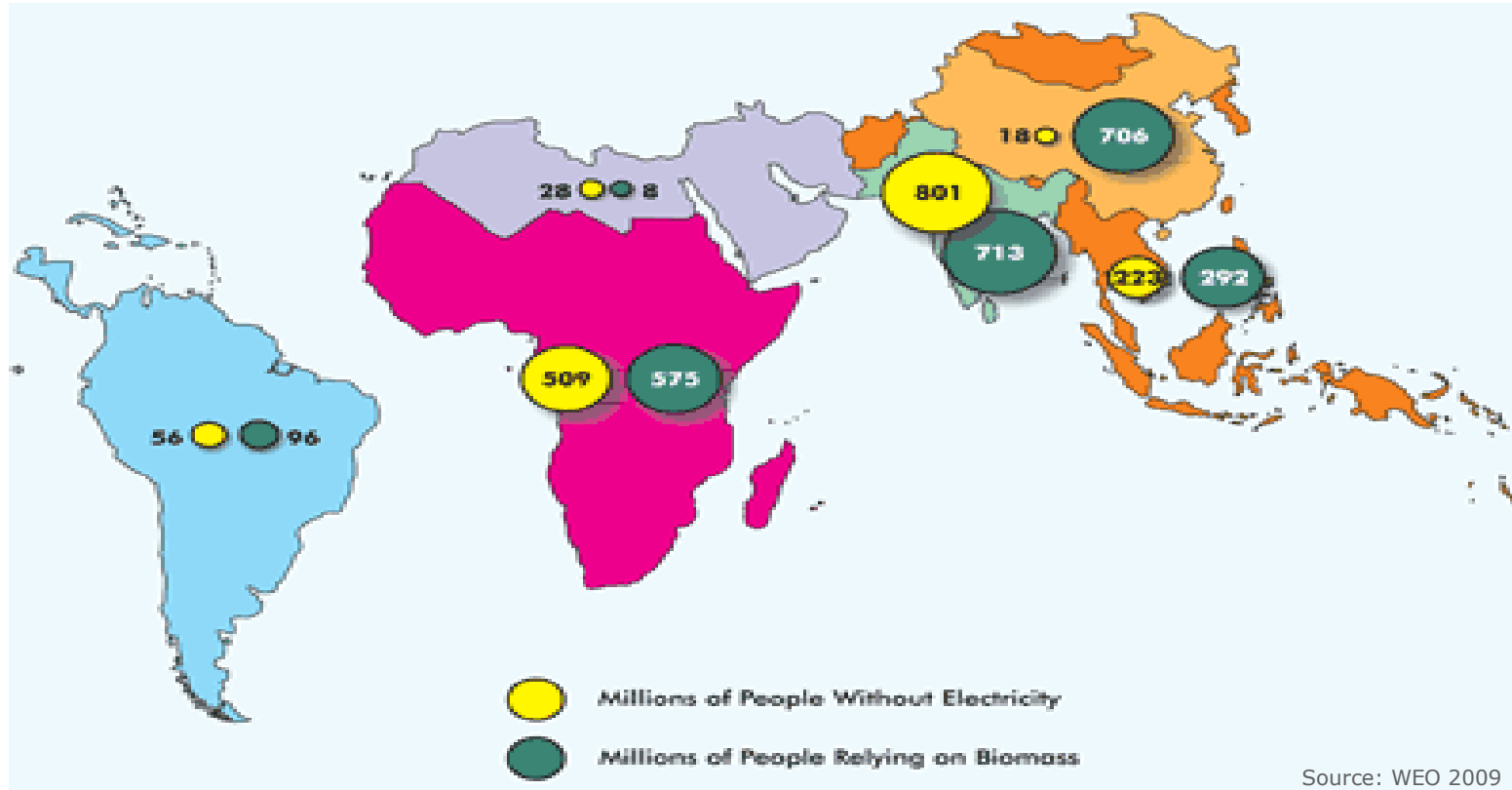


20% of **eni's** operational areas are located in countries with low HDI and 19% with medium (black and red areas in the map).

A large part of them is in Africa, where **eni** is the first international oil&gas producer.



# eni and energy poor countries



20% of **eni's** fields are located in countries with 50-80% of people lacking access to electricity.



## eni's contribution to address major challenges

---

### Energy efficiency

**Development of local gas markets**

42% of gas produced by eni in Africa is used locally.

**Flaring Down initiatives**

Associated gas is often flared and wasted in operating countries.

Associated gas is used by eni to provide natural gas to local markets, for power generation and for energy efficiency.

**Renewables today and tomorrow**

Solar based community development initiatives and renewables to enhance plants efficiency.

106 ml\$ investments in research on solar energy in the next 4 years.

**Against climate change, for sustainable development**



eni

## what is flaring and why is it happening?

---

- In some countries gas associated to oil production is burnt without recovering heat or electricity.
- Gas flaring generates GHG emissions so contributing to the Climate Change.
- Lack of market opportunities and infrastructures are common reasons for flaring gas.
- This is a waste of a valuable resource.



## how large is flaring?

---

**In 2010 134 billion cubic meters of natural gas was flared.  
Currently flaring generates 400 Million tons of GHG.**

### It is about:

- **5.5% of world gas production**
- **27% of gas consumption in the USA**
- **\$20 billion worth...**

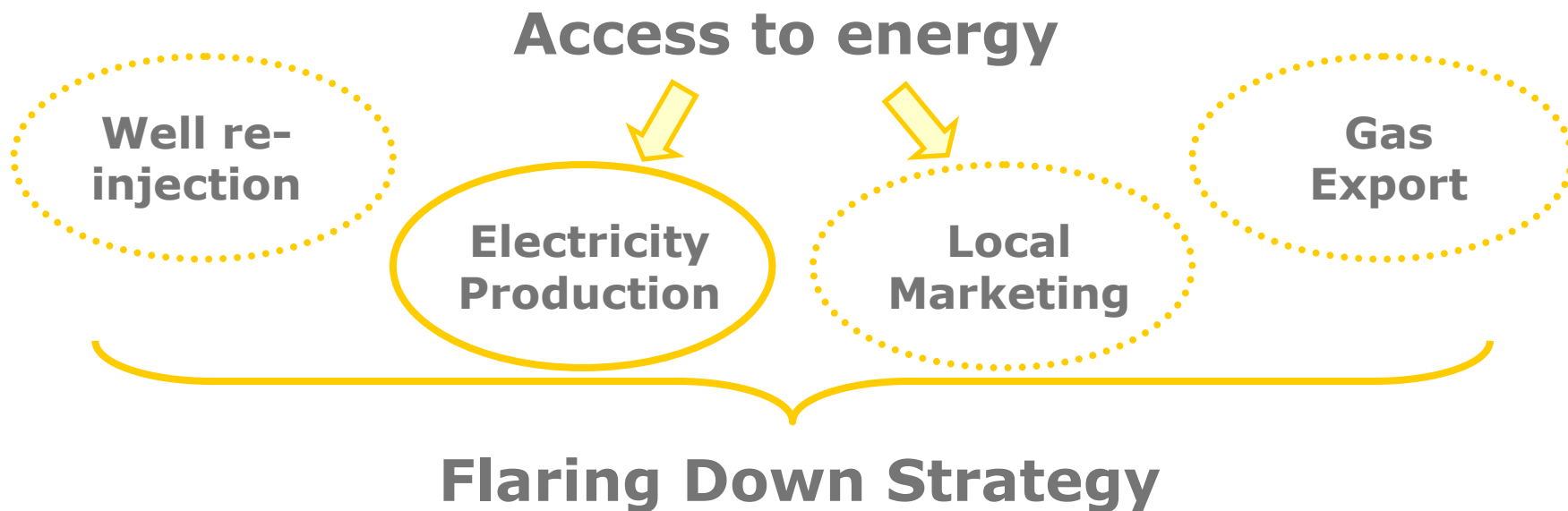


eni

## eni's flaring down and access to energy strategy

---

Several countries struggling with energy poverty are major "flarers".



eni is reducing its flaring emissions in 2014 by 80% compared to 2007 (investments: 1.1 B\$).

In Nigeria eni was flaring the 40% of associated gas at the end of the 90s. Now it is recovering the 83% of it and planned to raise it up to 95% by 2014.



## eni's experience: the Kwale – Okpai Project

---

In Nigeria 76,5 million people has no access to electricity.

In 2005 **eni** and its partners (Nigerian National Petroleum Company and Conoco-Phillips) inaugurated a 480 MW combined cycle power plant in Okpai.

- The project was registered as Kyoto Protocol CDM in 2006.
- The power plant produces the 15 – 20% of the Nigerian electricity production.



**Kwale Oil-Gas Processing Plant**

**14km Gas Pipeline**



**Okpai IPP**



eni

## eni's experience: Congo Republic

In Congo Republic 2.3 million people has no access to electricity, while the 74% of population is without access to modern sources of energy.

In 2008 **eni** began recovering associated gas from M'Boundi oilfield for power generation, with major achievements:

- 60% of the Congolese power generation (CED + CEC).
- 700.000 people served: per capita power consumption from 300 to 462 MWh/year (2007 – 2010). The national mean is 137 MWh/year.

<b>2008</b>	CED installed capacity is doubled (25 MW → 50 MW)
<b>2009</b>	CEC is built (150MW installed capacity)
<b>2010</b>	CEC installed capacity raised up to 330MW
<b>2010 - 2014</b>	CEC installed capacity raise up to 450 MW



eni



## **eni's approach: strenghts and shortcomings**

---

**Is eni's approach tailored to address the "sustainable energy for all" target?**

### **Strenghts**

**Delivers sustainable energy and complies with the Kyoto Protocol.**

**Enables industrial, commercial and household use as well.**

**Brings large scale and reliable energy.**

### **Shortcomings**

**Applicable only where gas is available.**

**Economically sound only for large scale production.**

**Applicable only where gird exists.**



## the energy access “dilemma”

---

- How to improve 3 billion people access to modern energy services while avoiding negatives impacts on Climate Change?

Energy Efficiency

Large Scale Access  
to Energy

Renewable Energy



**COLLECTIVE ACTION**

## collective action: private sector involvement

---

- A Collective Action facing all dimensions of energy poverty must engage many business sectors.

### Energy

Innovating utility services

Pre-paid metering

Producing sustainable energy

### Financing

Heartening private investment

Pooling resources

Win IFI interest

### ICT

Innovative billing systems

Innovative payment systems

Remote banking

**Improving  
energy access**

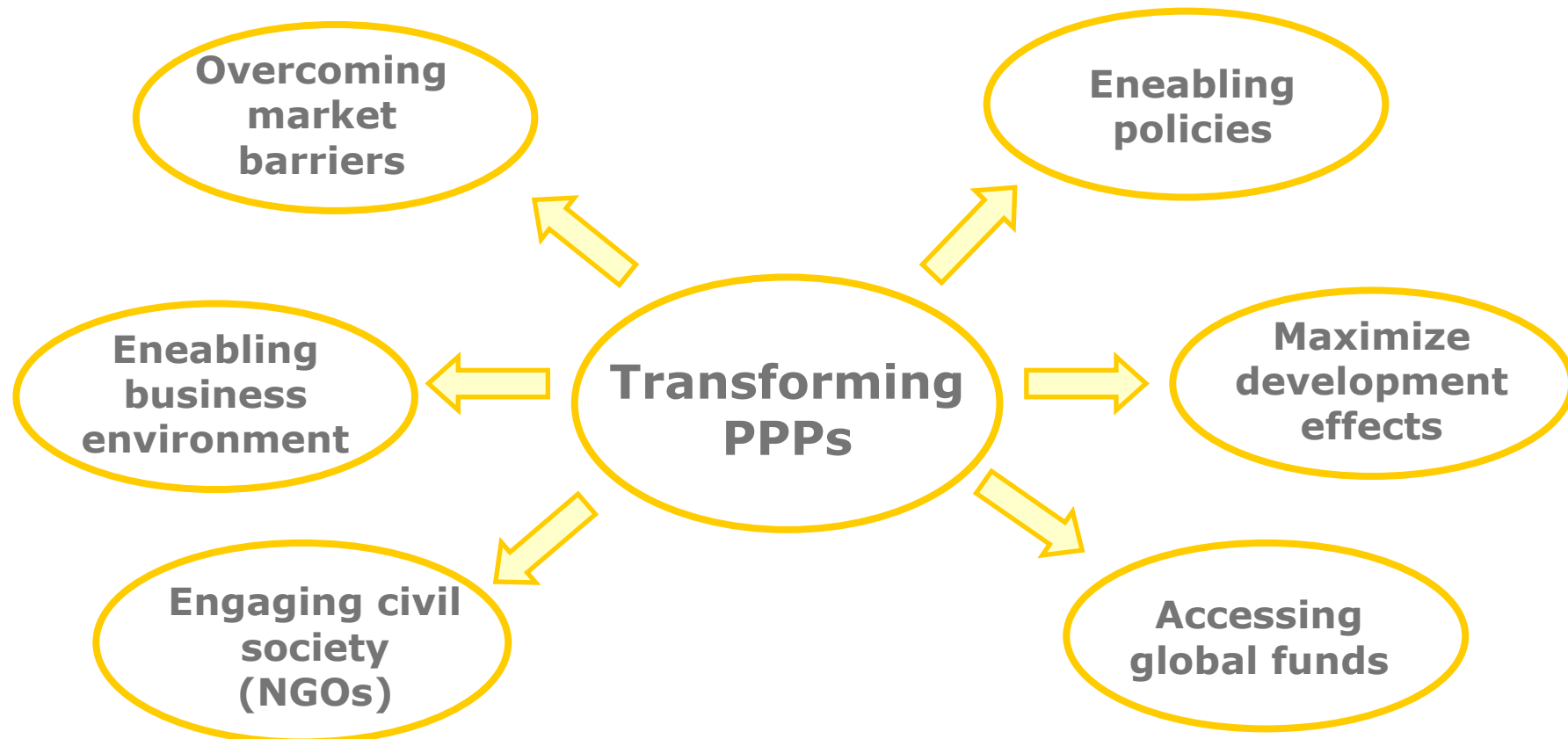


eni

## collective action: public-private partnerships

---

- **Bringing different business sectors is not enough. There is the need for a new kind of Public-Private Partnerships (PPPs)**



eni

## **sustainable energy for all: we stand for it**

---

- **September, 20, 2011: at the UN Head Quarter in New York, during the next Private Sector Forum a common effort will be called on:**

**Access to Sustainable Energy for All**

**We are ready to work together to reach this goal.**

