

TOOLS TO ENHANCE ENERGY EFFICIENCY
Cooperation between Russia and Italy

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Panel discussion: Russia-European cooperation. The path to global
improvements in energy efficiency

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Content of the presentation

- I. GLOBAL ENERGY EFFICIENCY TARGETS
- II. BEST PRACTICE EXCHANGE:
TOOLS FOR ENERGY EFFICIENCY

I. GLOBAL ENERGY EFFICIENCY TARGETS

Paris Agreement COP21

At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal.

The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by **limiting global warming to well below 2°C**.

The agreement also acknowledges **the need to cooperate** and enhance the understanding, action and support in different areas such as early warning systems, emergency preparedness and risk insurance.



For more information: https://ec.europa.eu/clima/policies/international/negotiations/paris_en

Pillars for global energy transformation

HOW TO REACH PARIS AGREEMENT GLOBAL TARGETS?

IEA highlights three main pillars:

- I. **TRANSPORT ELECTRIFICATION:** further uptake of electric vehicles in the light-duty passenger vehicle segment.
- II. **POWER SECTOR DECARBONISATION:** further increase in the use of low-carbon technologies for power generation, in particular renewables and nuclear.
- III. **BUILDINGS RENOVATION:** further increase in the renovation rate of the stock of existing buildings to reduce heating and cooling demand per square metre of floor space in industrialised and transition economies.

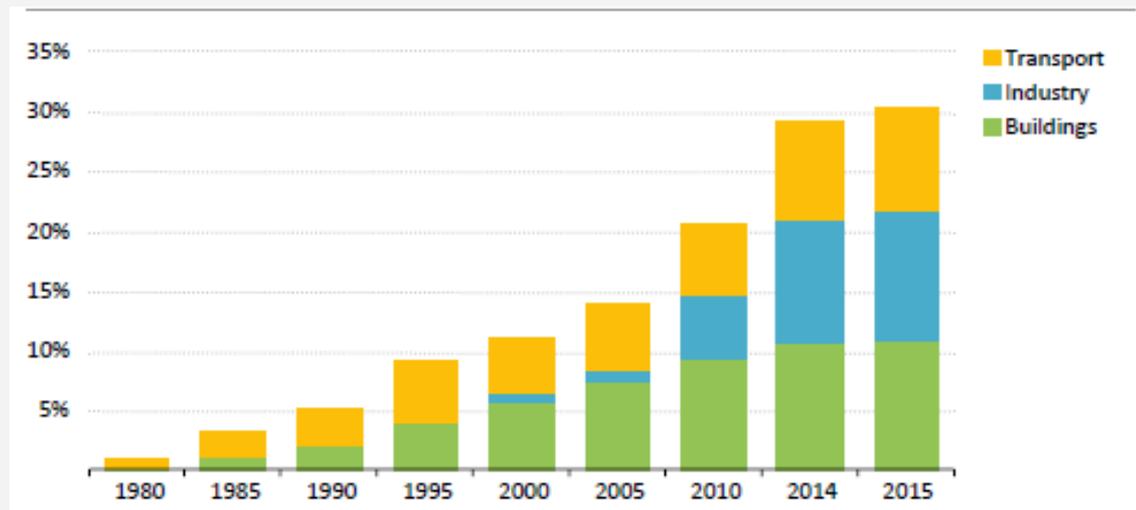
Source: WEO 2016, pg. 342, 450 scenario

Call for Energy Efficiency Measures

Increasing of energy efficiency measures

By **setting minimum efficiency levels**, policy-makers help to overcome behavioral barriers to adopting more efficient technology and thus encourage consumers to save energy and money.

Efficiency-regulated energy use in 2015 covered 30% of global final energy consumption

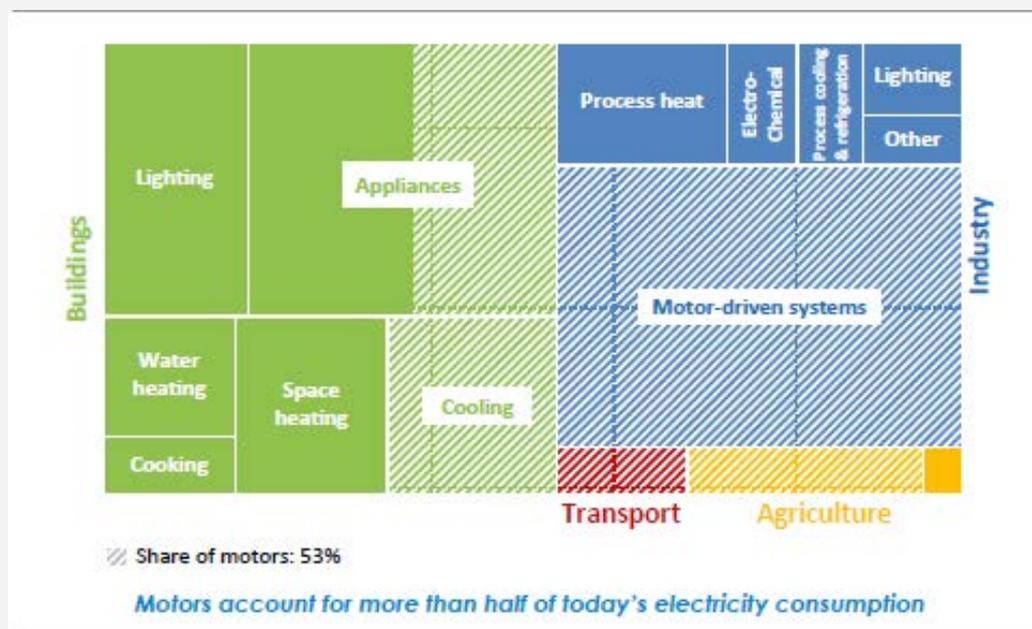


Source: WEO 2016

Global final electricity consumption by end-uses

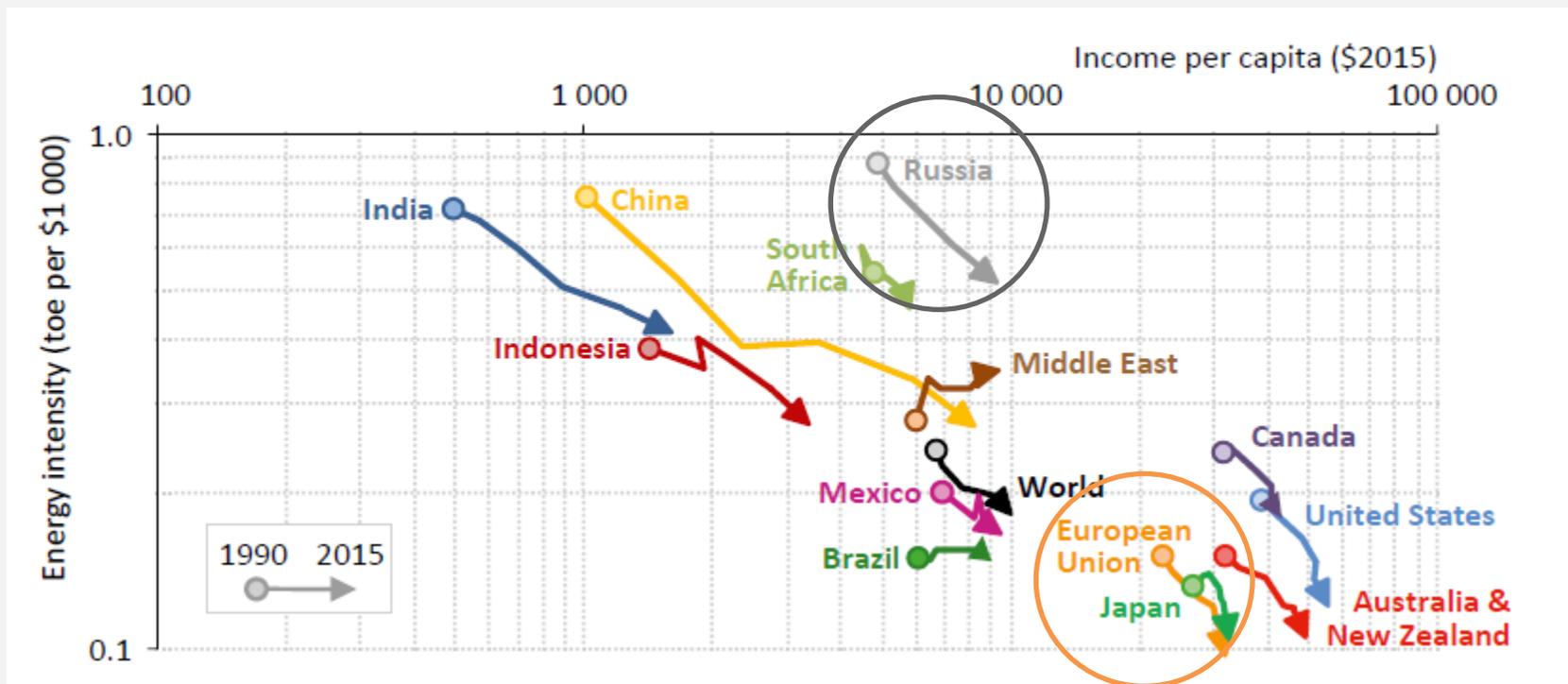
Electricity consumed globally: **>50%** used in **electric motor systems**.

The **industry** sector and the **buildings** sector together account for **over 90%** of electricity consumption by motors



Source: WEO 2016, Global total final electricity consumption by end-uses, 2014

Decrease energy intensity to decarbonize



Source: WEO 2016

1990 - 2015

Both Russian and European Union energy intensity has declined

European Union: Climate and energy package 2030

- **an improvement of at least 27% of energy efficiency**



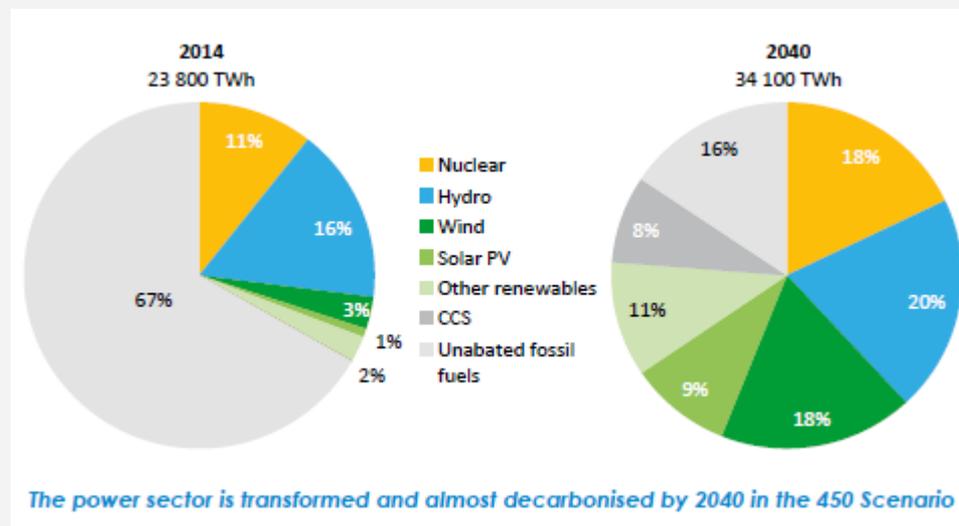
- a reduction of at least 40% of greenhouse gas emissions
- a share of at least 27% renewable energy

Italy - Russia cooperation

- Italy has implemented important **policy measures** on energy efficiency; Russia, being one of the largest oil and gas supplier belongs to the group of countries with high energy efficiency potential.*

(* Roadmap EU-Russia Energy Cooperation until 2050, March 2013)

- Natural gas** is a vehicle for energy transition



Source: WEO 2016

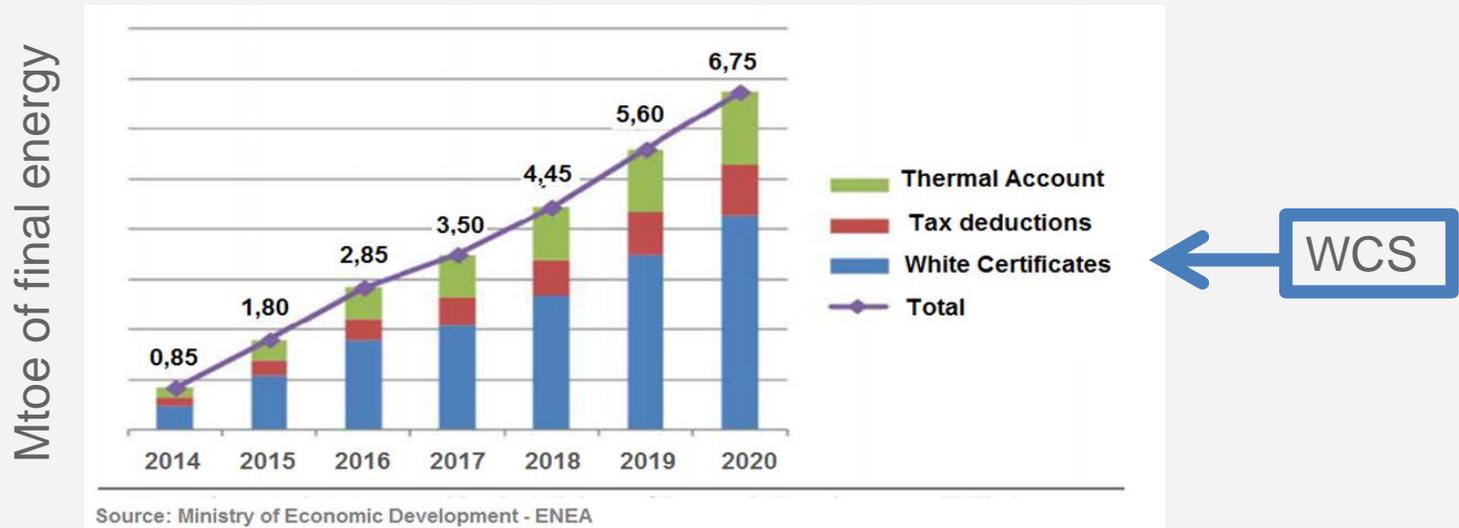
II. BEST PRACTICE EXCHANGE: TOOLS FOR ENERGY EFFICIENCY

Different impact of Italian tools for energy efficiency

The EU Commission adopted the 'Energy efficiency plan 2011' which was followed in October 2012 by the Directive on EE (2012/27/EU) setting out national EE targets.

The Article 7 of the EU Directive 2012/27/EU requires from Member States to apply an **energy efficiency obligation scheme** or alternative policy measures that would deliver a certain amount of end-use energy savings over 2014-2020.

In Italy the EED provisions have been fully transposed into national laws through the Lgs. Decree n. 102/2014.



Contribution of the main efficiency measures to attain the savings target required by article 7 of Directive 2012/27/EU

1. The main tool: Italian White Certificates Scheme (WCS)

Tool: **White Certificates Scheme** (WCS) is the most relevant scheme for promoting energy efficiency in Italy (at least 60% of the target at 2020 of EU directive 2012/27/EU).

WCS is a market-based scheme, technology neutral.

Certificates: White certificates attest the achievement of end-use energy savings through energy efficiency improvement in industry, residential and public sector.

The certificates are tradable instruments.

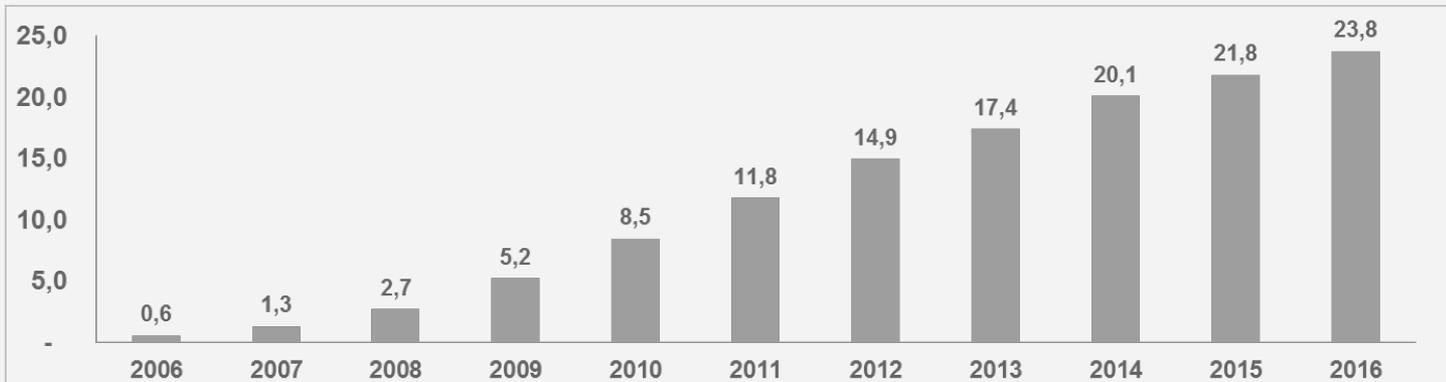
Subjects: Electricity and natural gas distributors with more than 50.000 customers, are **obliged** to achieve a quantified target of energy savings yearly (WCS).

All companies and citizens can benefit from WCS, through energy saving companies (ESCOs).

WCS: Cumulative energy saving

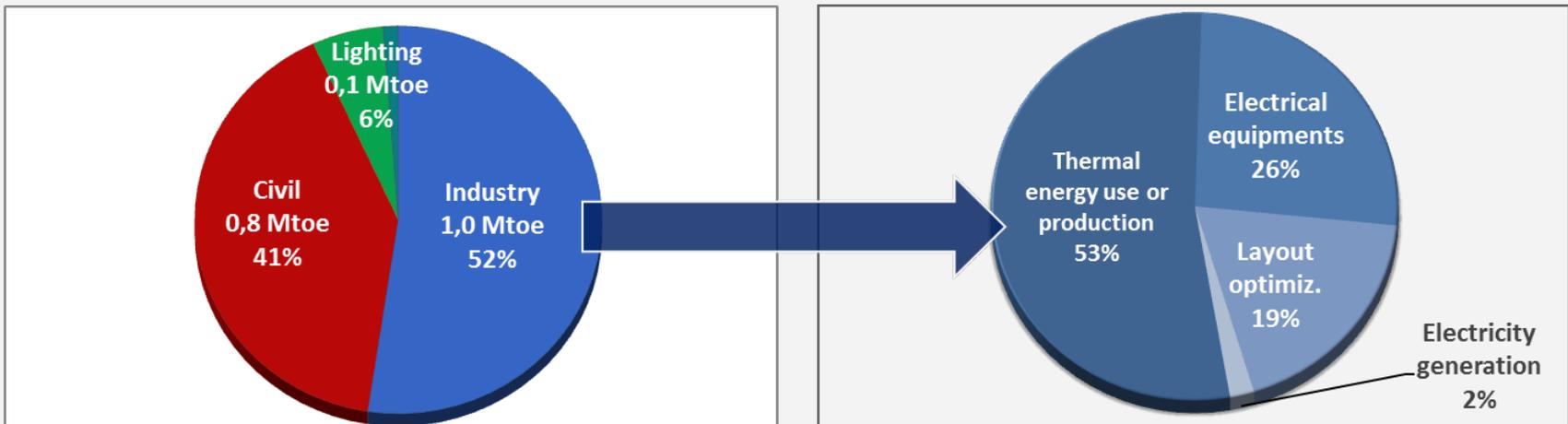
[Million of toe]

Source: GSE



2016: almost 2 Mtoe of annual energy saving

Focus on industrial sector



2. Customer Awareness for energy efficiency - smart technology

Data availability for the consumer - kit:
smart device to be plugged in electricity sockets in the house with standard USB port, sending real time data to appliances, mobile phone, displays and controllable devices.

Pilot projects
Interesting results:

Net energy saving: -4%



Industry alliance:

include appliance manufacturers and
TLC providers to define open
common standards and use-cases

Conclusion

- **Paris Agreement** calls for Energy Transition
- Russian **gas natural** is a vehicle for transition
- Italy has great experience and tools to enhance **renewable energy and energy saving**

**Importance of best practice exchange
and **Russia-Italy energy cooperation** to
reach global targets**

Grazie per l'attenzione!

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