

# INVEST IN ITALY: Right Time, Right Place

RENEWABLE ENERGY &  
ENERGY EFFICIENCY  
July 2018

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# Italy

## The Perfect Platform for Renewable Energy and Energy Efficiency

• July 2018 •



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3<sup>rd</sup> largest economy in the Eurozone

Italy is open to **Renewable energy and Energy efficiency**

Italy has a large & skilled **workforce**

Italy has among the lowest **labour costs** in Western Europe

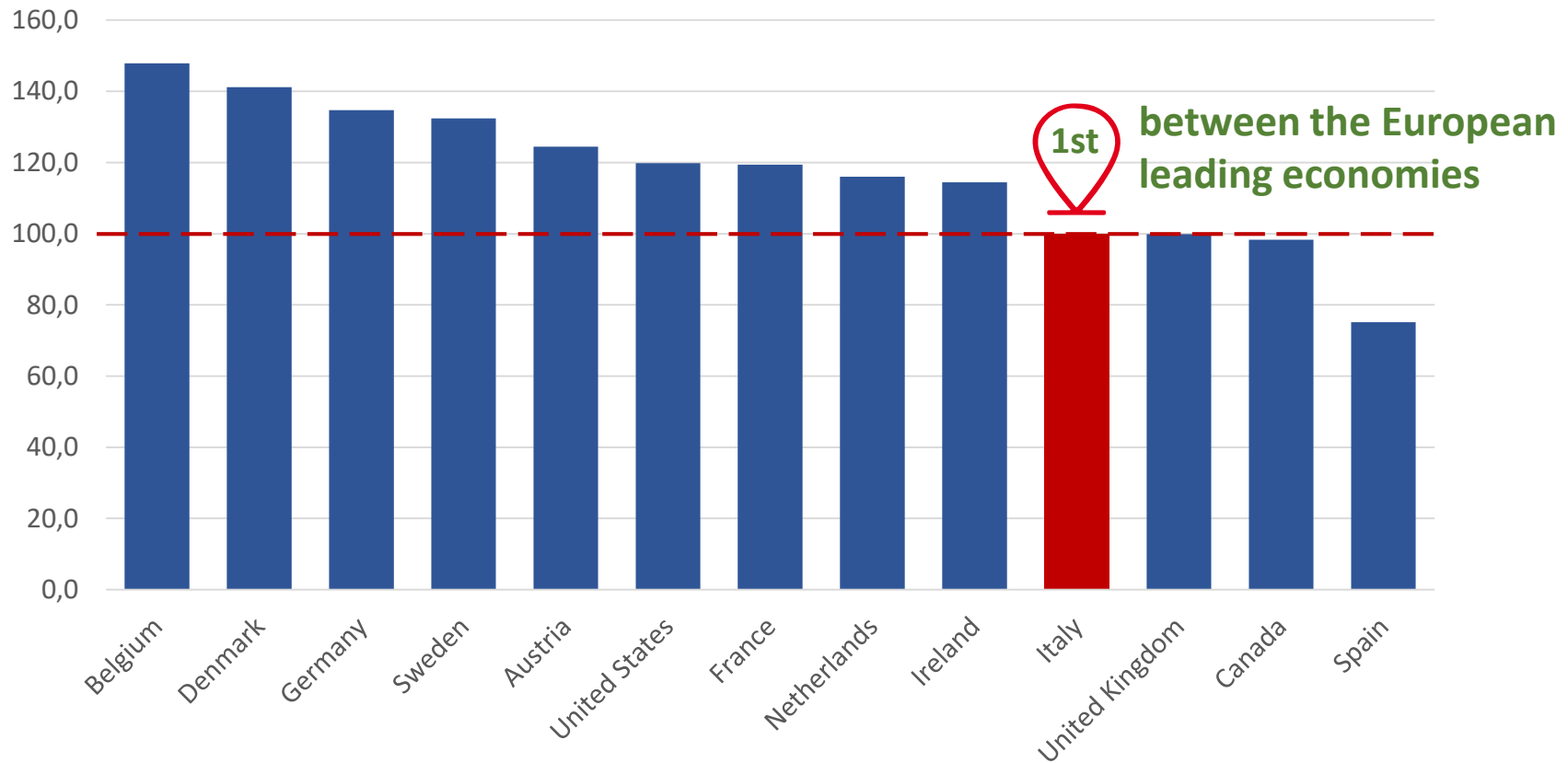


Competitive location for investment. Cheaper than USA and many Western European competitors





## Labour cost



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Source: Conference Board, International Labor Comparisons (2017 – data 2015)



## Economic Outlook

**GDP** growth of 1.5% in 2017 is forecast for **1.4%** for 2018

Unemployment rate fell by 0,8% between 2016/2017

**Exports** increased by 7.5% between August 2016/2017

**Investors' confidence index** (2017) grows: +3 than 2016.

Italy ranks **13<sup>th</sup>** in 2016 for FDI attractiveness, +5 than in 2015

Italy is the **8th** economy in the world, based on strong export





The Italian Government is successfully promoting a number of reforms that are revitalizing the Italian economy.

## Labour Regulation Reform

The "**Jobs Act**", i.e. the 2015 labour market reform, is aimed at making the Italian work environment more aligned to the **flexibility** that is needed in today's economic global landscape with the urgency of a reinforced attractiveness of the country.

The Jobs Act's key points are:

- **deregulation of dismissal regime** (i.e. indemnity for wrongful dismissal in lieu of the reinstatement)
- **deregulation of fixed-term contracts**
- significant **tax/social security contribution breaks** for employers that offer **permanent job contracts**
- promotion of **firm-level collective bargaining**
- job seekers re-allocation by improving private and public labour market institutions

❖ **New incentives for hiring young workers** have been introduced **since 2017**





## Corporate Taxation Reform

In the last years the Italian Parliament approved new legislation, including tax incentives, specifically aimed at making Italy an attractive location for investment in manufacturing and R&D.

Among those specific tax incentives, the following are particularly relevant:

- **Patent box**
  - a 5 year-elective regime will grant a **partial tax exemption** on **income** derived from qualifying **intangible assets** (patents, know-how, trademarks) as long as the Italian company performs R&D activities
- **New R&D tax credit**
  - enhanced for 2015-2019, with the elimination of any access limitation based on turnover and a doubled cap amount (from 2.5M to 5M euro per year)
- **Tax credits/incentives** for the **purchase of machinery & industrial equipment**
- **Full deductibility** from the **IRAP** (regional tax) of labour cost for **employees** hired on a **permanent basis**





## Corporate Taxation Reform

Other tax incentives are:

### The “Destination Italy” Decree

- created a specific and dedicated **desk** of the **Revenue Agency** (*Agenzia delle Entrate*) in order to help and provide information **to foreign investors**, and
- enhanced the **tax ruling** procedures, by extending the validity period of the preventive rulings from 3 to 5 years and including also the existence of Italian permanent establishments of foreign companies







# Renewable energy & Energy efficiency



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## Strong Points

- ✓ Excellent positioning of Italy in Europe and long experience in the field of renewable energy and energy efficiency
- ✓ National and European policy promoting renewable energy and energy efficiency
- ✓ Growing interest and attention payed from customers and companies towards renewable energy and energy efficiency
- ✓ Advantageous geographic position and availability of natural resources (e.g. high sun exposure)
- ✓ Presence of specialized companies and global players
- ✓ Presence of clusters and technological districts
- ✓ Presence of top Universities, competitive and skilled workforce
- ✓ Excellence in R&D and innovation
- ✓ Competitive labour cost





Italy has the highest percentage of Renewable Energy in the Energy Mix

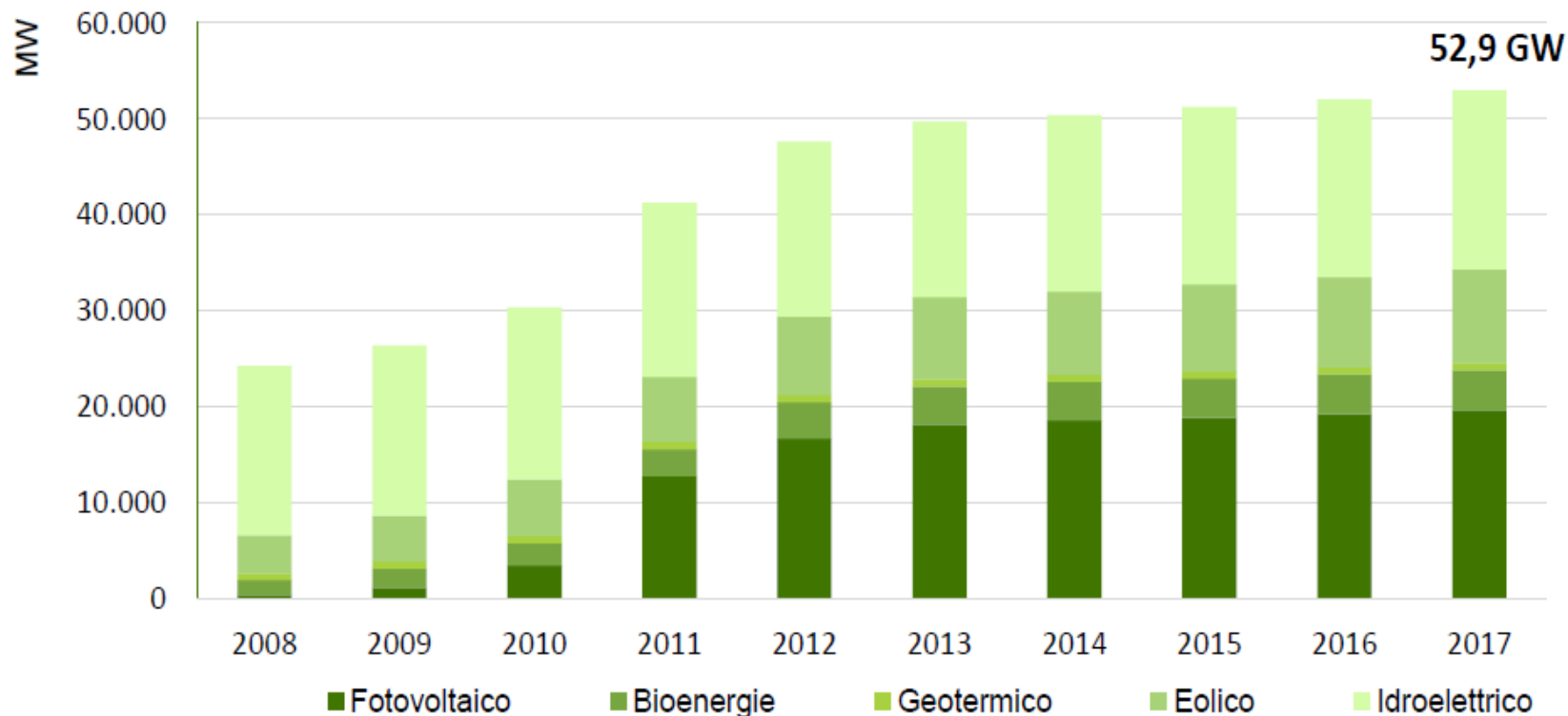
| COUNTRY   | PHOTOVOLTAIC | WIND | HYDROPOWER | BIOMASS | GEOTHERMAL | OIL        | CARBON | GAS | NUCLEAR |     |
|---|--------------|------|------------|---------|------------|------------|--------|-----|---------|-----|
|    | 9%           | 6%   | 14%        | 6%      | 2%         | <b>37%</b> | 6%     | 12% | 45%     | 0%  |
|    | 6%           | 16%  | 3%         | 8%      | 0%         | <b>33%</b> | 4%     | 37% | 13%     | 12% |
|    | 5%           | 18%  | 8%         | 2%      | 0%         | <b>33%</b> | 13%    | 17% | 16%     | 21% |
|    | 4%           | 11%  | 9%         | 6%      | 0%         | <b>30%</b> | 2%     | 23% | 20%     | 25% |
|    | 3%           | 15%  | 3%         | 8%      | 0%         | <b>29%</b> | 1%     | 7%  | 41%     | 21% |
|   | 2%           | 5%   | 10%        | 2%      | 0%         | <b>19%</b> | 1%     | 1%  | 7%      | 72% |
|  | 0%           | 8%   | 1%         | 6%      | 0%         | <b>15%</b> | 3%     | 77% | 5%      | 0%  |





Renewable energy installed capacity in Italy has grown in recent years

Renewable energy: installed capacity in Italy 2008-2017



Fonte: Terna



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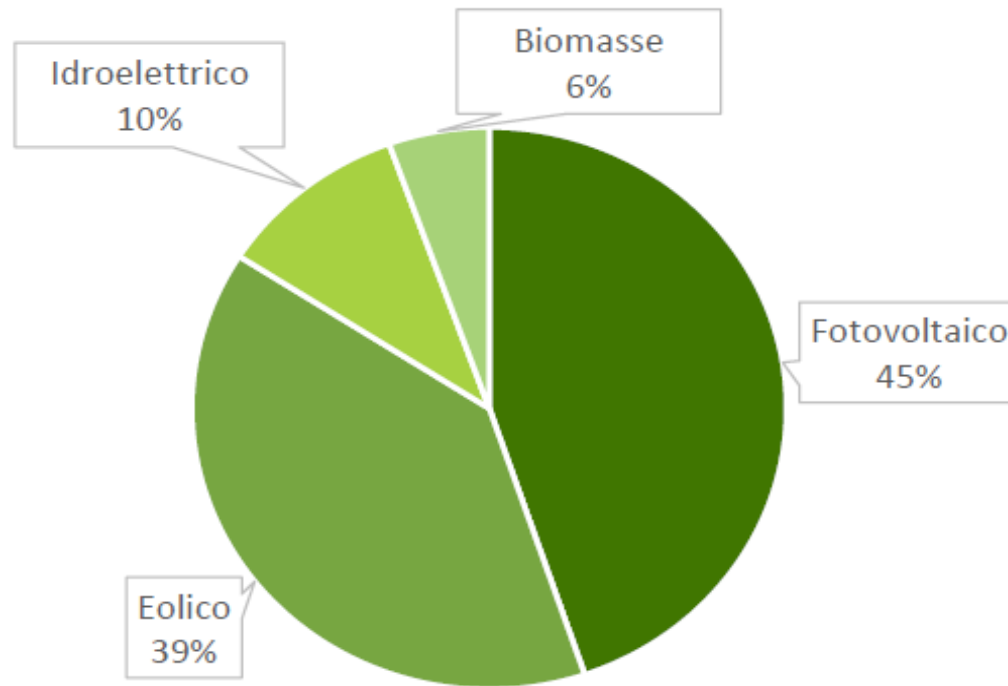


Source: Renewable Energy Report 2018. Il futuro delle rinnovabili in Italia. Energy & Strategy – Politecnico di Milano, may 2018



## New installed capacity in 2017: 900 MW

Renewable energy: new installed capacity in Italy - year 2017



**PV: 410 MW**

**Wind: 360 MW**

**Hydropower: 95 MW**

**Biomass: 50 MW**



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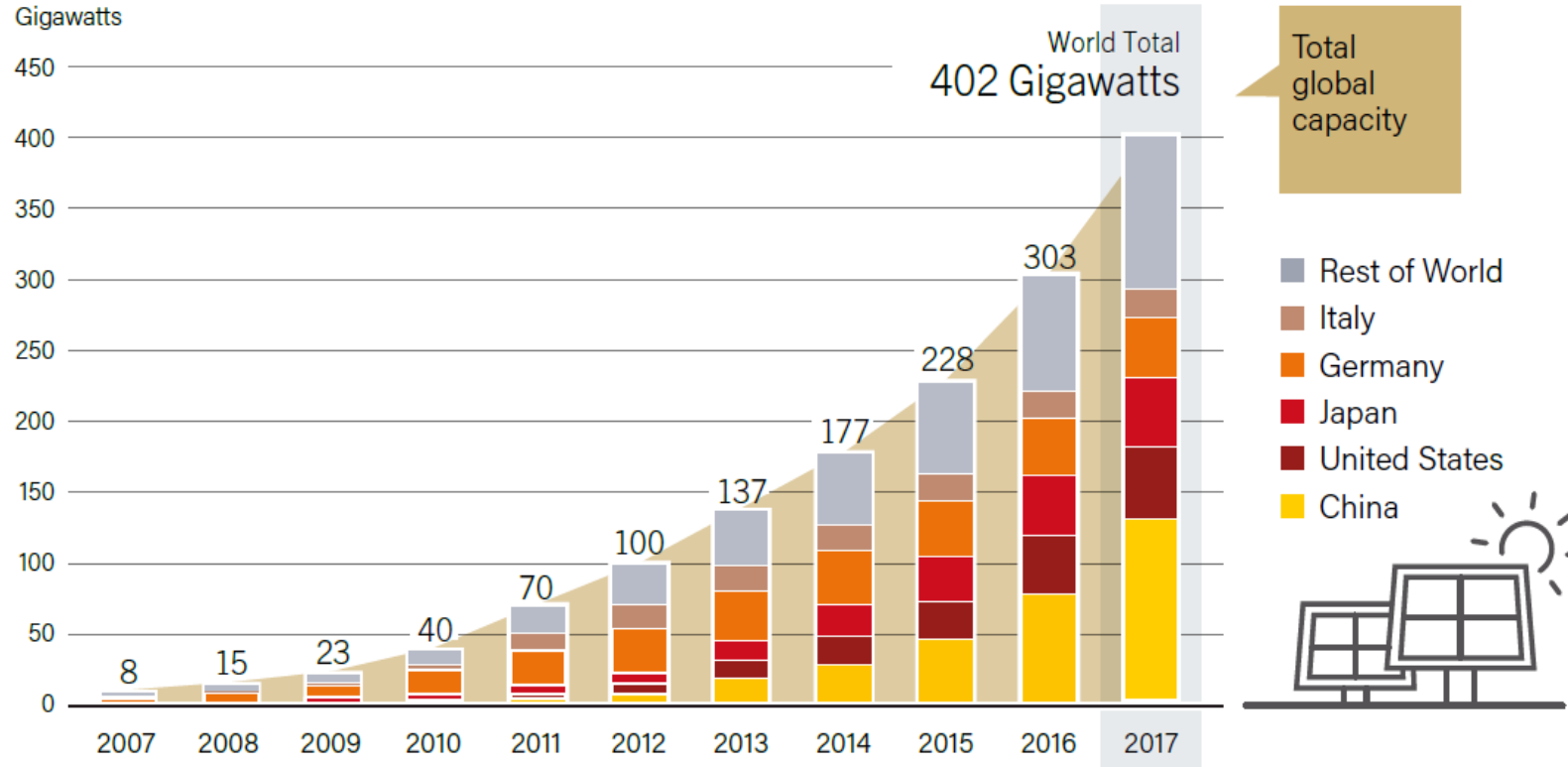


Source: Renewable Energy Report 2018. Il futuro delle rinnovabili in Italia. Energy & Strategy – Politecnico di Milano, maggio 2018



## Italy is amongst the top countries for PV cumulative capacity

Solar PV Global Capacity, by Country or Region, 2007-2017



Note: Data are provided in direct current (DC).



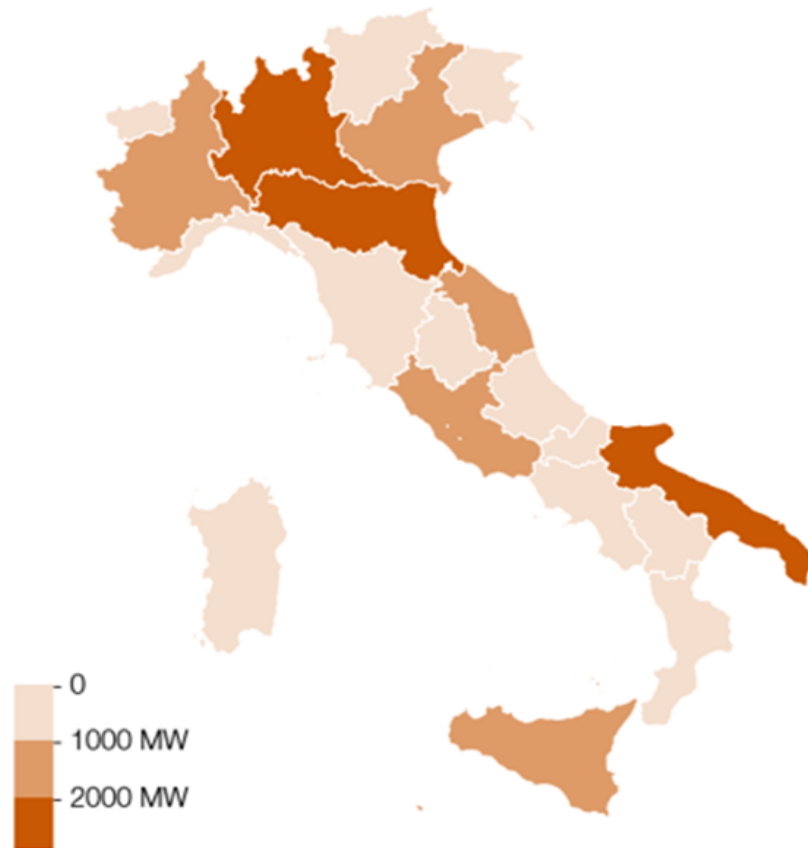
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Source: Renewables 2018. Ren21



## PV plants distribution across Italian regions: number and total power



| Regione               | Totale         |               |
|-----------------------|----------------|---------------|
|                       | Numero         | Potenza [MW]  |
| PIEMONTE              | 55.532         | 1.580         |
| VALLE D'AOSTA         | 2.285          | 23            |
| LOMBARDIA             | 120.372        | 2.255         |
| TRENTINO ALTO ADIGE   | 24.382         | 424           |
| VENETO                | 109.739        | 1.875         |
| FRIULI VENEZIA GIULIA | 32.740         | 525           |
| LIGURIA               | 8.455          | 104           |
| EMILIA ROMAGNA        | 82.241         | 2.003         |
| TOSCANA               | 41.838         | 800           |
| UMBRIA                | 18.057         | 475           |
| MARCHE                | 27.039         | 1.074         |
| LAZIO                 | 52.103         | 1.341         |
| ABRUZZO               | 19.556         | 732           |
| MOLISE                | 3.981          | 177           |
| CAMPANIA              | 31.214         | 791           |
| PUGLIA                | 47.175         | 2.646         |
| BASILICATA            | 7.924          | 371           |
| CALABRIA              | 23.876         | 519           |
| SICILIA               | 51.036         | 1.380         |
| SARDEGNA              | 35.186         | 751           |
| <b>Totale</b>         | <b>794.731</b> | <b>19.848</b> |



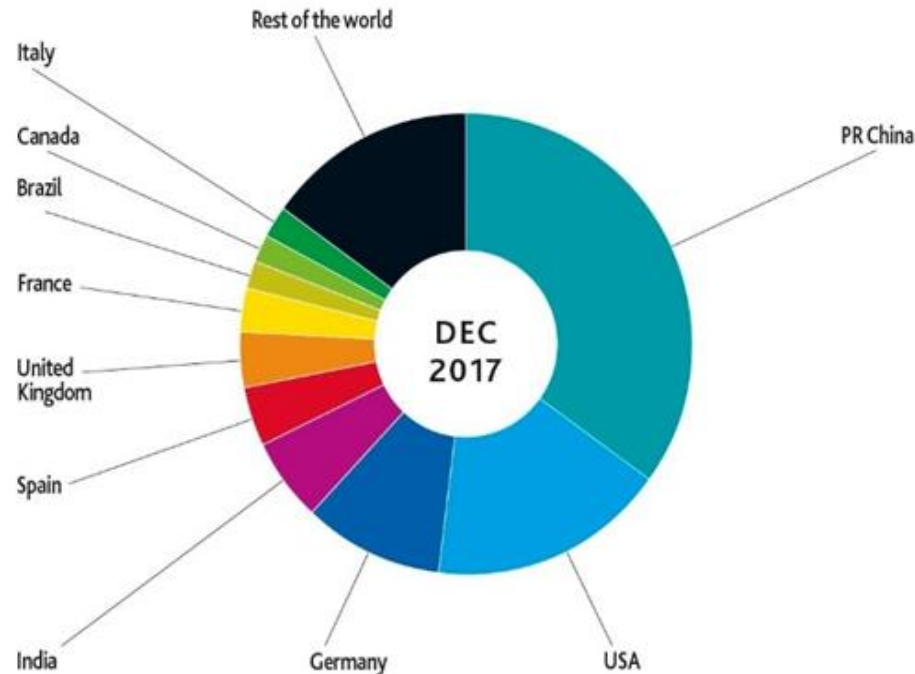
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Source: Terna – Gaudi database. [www.terna.it/it-it/sistemaelettrico/fontirinnovabili.aspx](http://www.terna.it/it-it/sistemaelettrico/fontirinnovabili.aspx). June 2018.



Italy is amongst the top ten countries in the wind sector for cumulative capacity...

**TOP 10 CUMULATIVE CAPACITY DEC 2017**



| Country             | MW             | % Share    |
|---------------------|----------------|------------|
| PR China            | 188,392        | 35         |
| USA                 | 89,077         | 17         |
| Germany             | 56,132         | 10         |
| India               | 32,848         | 6          |
| Spain               | 23,170         | 4          |
| United Kingdom      | 18,872         | 4          |
| France              | 13,759         | 3          |
| Brazil              | 12,763         | 2          |
| Canada              | 12,239         | 2          |
| Italy               | 9,479          | 2          |
| Rest of the world   | 82,391         | 15         |
| <b>Total TO P10</b> | <b>456,732</b> | <b>85</b>  |
| <b>World Total</b>  | <b>539,123</b> | <b>100</b> |

Source: GWEC



Source: GWEC Wind 2017 Report





## Wind plants distribution across Italian regions: number and total power



| Regione               | Totale       |                 |
|-----------------------|--------------|-----------------|
|                       | Numero       | Potenza [MW]    |
| PIEMONTE              | 18           | 19              |
| VALLE D'AOSTA         | 5            | 3               |
| LOMBARDIA             | 9            | 0               |
| TRENTINO ALTO ADIGE   | 11           | 0               |
| VENETO                | 21           | 13              |
| FRIULI VENEZIA GIULIA | 5            | 0               |
| LIGURIA               | 33           | 57              |
| EMILIA ROMAGNA        | 70           | 25              |
| TOSCANA               | 127          | 123             |
| UMBRIA                | 25           | 2               |
| MARCHE                | 51           | 19              |
| LAZIO                 | 65           | 53              |
| ABRUZZO               | 48           | 241             |
| MOLISE                | 79           | 376             |
| CAMPANIA              | 599          | 1.431           |
| PUGLIA                | 1.185        | 2.472           |
| BASILICATA            | 1.414        | 1.112           |
| CALABRIA              | 413          | 1.086           |
| SICILIA               | 880          | 1.825           |
| SARDEGNA              | 590          | 1.042           |
| <b>Totale</b>         | <b>5.648</b> | <b>9.901,16</b> |



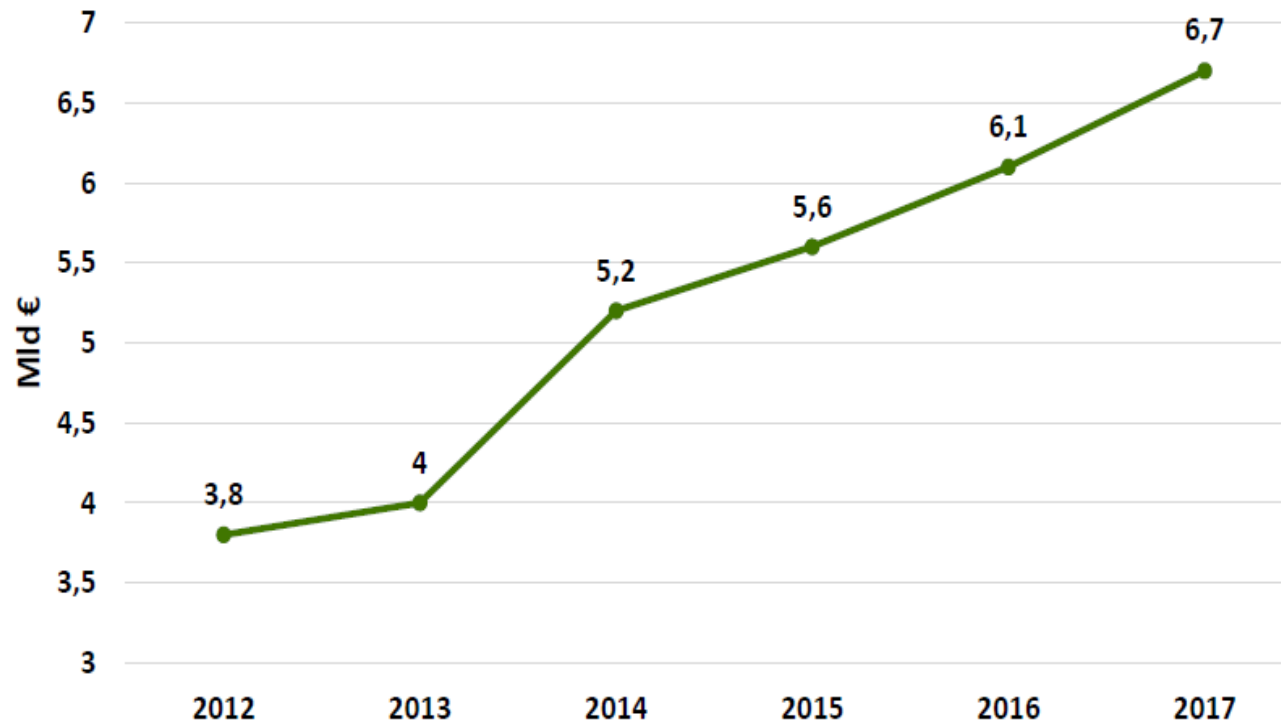
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Source: Terna – Gaudi database. [www.terna.it/it-it/sistemaelettrico/fontirinnovabili.aspx](http://www.terna.it/it-it/sistemaelettrico/fontirinnovabili.aspx). June 2018.



Investments in Energy Efficiency have increased rapidly in recent years

Energy Efficiency: total investments in Italy 2012-2017



Investments in 2017:  
**6,7 billions €**

- 65 % Home& Building
- 33 % companies
- 2 % Public Administration



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## National level:

- ❖ **National Energy Technological Cluster** (coordinator: ENEA. Other members: CNR, e-distribuzione, ENI, EnSiEL, Nuovo Pignone Tecnologie, RSE, Terna.
- ❖ **Di.T.N.E. - Distretto Tecnologico Nazionale sull'Energia** <http://ditne.it>

## other Technological districts:



[www.energycluster.it](http://www.energycluster.it)



Renewable Energy Tech  
District - Tuscany  
<http://dte-toscana.it>



Industrial District "The New Energy" – Apulia  
[www.lanuovaenergia.it](http://www.lanuovaenergia.it)



Smart Power System High-tech Energy Cluster - Campania  
<http://website.distrettosmartpower.it/>



Green and Hi-Tech District of Monza Brianza (Lombardy)  
[www.distrettohtmb.it](http://www.distrettohtmb.it)



Energy and Environment Technological District – Trentino Alto Adige  
[www.dttm.it](http://www.dttm.it)



Green Building District – Apulia  
[www.despuglia.it](http://www.despuglia.it)



Energy and Green Building District - Sicily  
[www.distrettoenergia.eu](http://www.distrettoenergia.eu)



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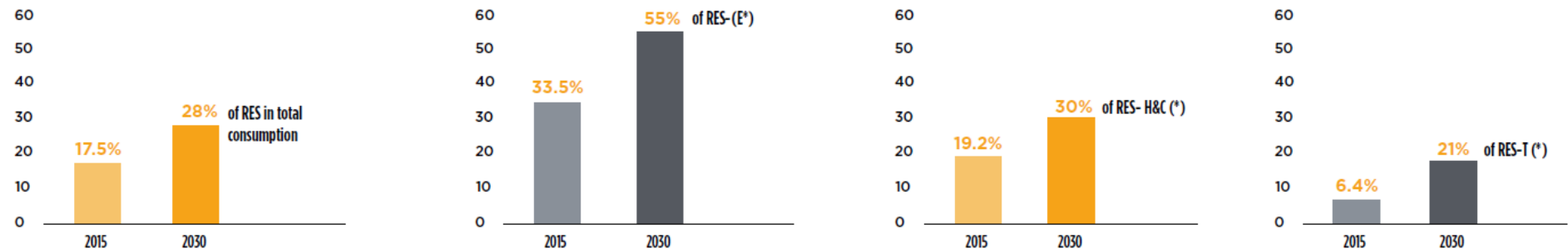


## Core targets

- reducing final energy consumption by a total of 10 Mtoe by 2030
- reaching a 28% share of renewables in total energy consumption by 2030,
- and a 55% share of renewables in electricity consumption by 2030
- strengthening supply security; narrowing the energy price gap
- furthering sustainable public mobility and eco-friendly fuels
- phasing out the use of coal in electricity generation by 2025

Further promoting the dissemination of low-emission RES.

### RES targets



(\*) RES-E: RES in electricity; RES-H&C: RES in heating & cooling; RES-T: RES in transport.





## Abundant and Skilled Workforce

Italy has some of the world's best engineering universities. Indeed, engineering is the 2<sup>nd</sup> highest course for enrolment in the country – **225,619** currently studying an engineering discipline.<sup>1</sup>

The engineering sector currently employs around 417,000 people in Italy.<sup>3</sup>

Mainstay

The Technological Departments of the Italian Universities annually produce a pool of graduates with the knowledge and industry experience to immediately enter the work force.



POLITECNICO MILANO



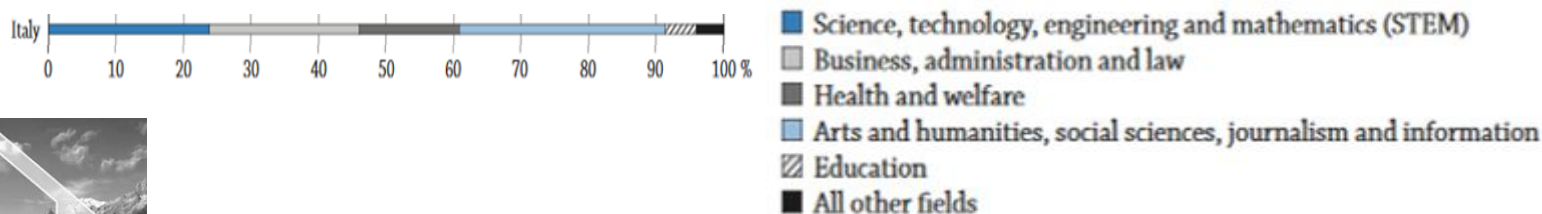
Politecnico di Bari



POLITECNICO DI TORINO

And much more.

Tertiary-educated 25-64 years old (2016) – Fields of study



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Source: <sup>1</sup>Ministry of Education <sup>2</sup>AlmaLaurea <sup>3</sup>La Repubblica; OECD ILibrary (<http://www.oecd-ilibrary.org/education/education-at-a-glance-2017>)



## National Research Centers...



Italian National Agency for New Technologies,  
Energy and Sustainable Economic Development

[www.enea.it](http://www.enea.it)

### Research activities:

- Energy efficiency
- Renewable energy sources
- Nuclear energy
- Climate and the environment
- Safety and health
- New technologies
- Electric system research



National Research  
Council of Italy

[www.cnr.it](http://www.cnr.it)

### Research activities:

- Biomedical sciences
- Chemical sciences and materials technology
- Earth system science and environmental technologies
- Engineering, ICT and technologies for energy and transportation
- Physical sciences and technologies of matter
- Social sciences and humanities, cultural heritage
- Biology, agriculture and food sciences



...and much more



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*Federazione del Comparto Energia*

[www.confindustriaenergia.org](http://www.confindustriaenergia.org)



[www.elettricitafutura.it](http://www.elettricitafutura.it)



<http://anienergia.anie.it>



<http://anierinnovabili.anie.it>



[www.anev.org](http://www.anev.org)



[www.utilitalia.it](http://www.utilitalia.it)



[www.fiper.it](http://www.fiper.it)



[www.anisgea.org](http://www.anisgea.org)



[www.assistal.it](http://www.assistal.it)



[www.assoesco.org](http://www.assoesco.org)



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Energy  
companies



Enel

[www.enel.it](http://www.enel.it)



Enel Green Power

[www.enelgreenpower.com](http://www.enelgreenpower.com)



e-distribuzione

[www.e-distribuzione.it](http://www.e-distribuzione.it)



Eni

[www.eni.com](http://www.eni.com)



Terna

[www.terna.it](http://www.terna.it)



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**Thank you for  
your attention**