An overview of the Italian Energy transition: the electricity sector

ENERGY IN MOTION
TOWARD 2030

GSE
GUARANTEES THE SUSTAINABLE DEVELOPMENT OF OUR COUNTRY
PROMOTES RENEWABLE SOURCES AND ENERGY EFFICIENCY

28/11/2018
An overview of the Italian Energy transition

AGENDA

• THE ITALIAN ELECTRICITY SECTOR
  • GSE ROLE AND ACTIVITIES
  • RENEWABLE TARGETS AND RESULTS
  • LOOKING AT THE FUTURE: THE ROAD TO 2030
THE ITALIAN POWER SYSTEM

PRODUCTION
Liberalized since 1999
(some independent producers since 1992)

TRANSMISSION
Natural monopoly:
TERNA Italian TSO since 2005

DISTRIBUTION
Natural monopoly:
Concessions to local owners of the grid (more than 80% to Enel)

RETAIL
Liberalized:
- Large consumers: since 2007
- Small and domestic consumers:
  • Voluntary since 2013
  • Compulsory since 2020
Italian electricity balance 2017

- Gross generation: 295.8 TWh
- Net generation: 285.3 TWh
- Pumping consumption: 2.5 TWh
- Net import: 37.8 TWh (12%)
- Grid losses: 18.7 TWh (6%)
- Electricity consumption: 301.9 TWh

Electricity consumption by sector:
- Agriculture: 22%
- Industry: 2%
- Services: 42%
- Households: 35%

Italian generation mix 2003-2017

Relevant growth of renewable generation, accompanied by the decrease of oil products first, then of natural gas.
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• ENERGY EFFICIENCY TARGET AND RESULTS
GSE ROLE

Ministry of Economic Development
Ministry of Economy and Finance
Regulatory Authority for energy, grid and Environment

100% ownership
Strategic guidelines
Regulation

100% ownership

Promote sustainability supporting renewables and energy efficiency

Supply electricity for customers without a supplier in liberalized retail market
Management of power, gas and environmental market platforms
Research and projects for energy sector development
In 2017, about **800,000 plants** managed, **1,200,000 public-private partnerships** and **14,7 € billion incentives**

### RES-E
- **Scope**: RES-E
- **Measures**: MD 23/6/2016, MD 6/7/2012, Conto Energia FV, Incentivo ex CV, TO, CIP 6, Net billing, Simplified purchase
- **Activities**: ~1,200,000 Contracts, ~800,000 RES Plants
- **Energy**: 65 TWh RES electricity incentivized

### RES-H
- **Scope**: Energy Efficiency
- **Measures**: Conto termico, White Certificates, High efficiency CHP
- **Activities**: ~50,000 Requests
- **Energy**: 2 Mtep Primary energy saving

### RES-T
- **Scope**: RES-T
- **Measures**: CIC, Biomethane
- **Activities**: ~5,000 Biofuel certifications
- **Energy**: 10,6 mln Gcal biofuel

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**GSE ACTIVITIES – A VIEW ON ITALIAN INCENTIVES**

- **Incentives**: 14,7 € bln
MONITORING RES EVOLUTION AND IMPACTS

Along with core operations, GSE monitors renewable energy and energy efficiency development, also supporting policy makers.

- **Social economic impacts**: 5 bln € RES investments, 110,000 FTE direct and indirect, temporary and permanent jobs
- **Policy making support**: National Energy Strategy, Energy & Climate Plan, Regional regulation monitoring
- **Incentives burdens and electricity & gas bills**: RES-E burden scenario:
  - 2020: 11,7 bn
  - 2030: 7,1 bn
  Typical Italian family energy expense amounts to 2.689 €, of which 113 €/y for sustainability
- **Technology cost**:
  - PV: 900-1500 €/kW
  - Wind: 1300-5000 €/kW
- **Environmental impacts**: -63 MtCO$_{2eq}$ GHG emissions saving
- **RES & Energy efficiency statistic**: 17.7% 2017 RES Target
- **5 bln € RES investments**
- **110,000 FTE direct and indirect, temporary and permanent jobs**
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• LOOKING AT THE FUTURE: THE ROAD TO 2030
EU Climate & Energy Package: 2020 targets
- 20% cut in GHG emissions (from 1990 levels)
- 20% share for renewable energy (17% for Italy)
- 20% improvement in energy efficiency (24% for Italy)

European Energy Union: 2030 targets
- 40% cut in GHG emissions (from 1990 levels)
- 32% share for renewable energy
- 32.5% in energy efficiency (from 2007 energy consumption scenario)

2040 target: 60% cut in GHG emissions

2050 target: 80% cut in GHG emissions
A EUROPEAN VIEW OF RES TARGET MONITORING

- Considering the European context in 2016, Italy is among the countries that have already reached 2020 targets.
- Italy is one of the countries with the higher increase with respect to 2005 share.
RES TARGET MONITORING: WHERE WE ARE

- In 2016 the share of renewables in gross final energy consumption was 17.4%, higher than 2020 Italian mandatory target set up by Directive 2009/28/EC (17%). Preliminary estimation on 2017 indicates that RES share could amount to about 17.7%.
- Observed trend: growth of RES consumptions, slower in recent years; decrease then weak recovery of total consumption.

### Total and RES Gross Final Consumption [Mtoe]

- **RES Transport**
- **RES Electricity**
- **RES Heating**
- **Total gross final consumptions**

### Observed RES share and 2020 target [%]

- **Observed Renewable share**
- **Renewable National Plan (2010)**

- **17.7%**

- **17.0%**

- **8.1% 8.6% 9.2% 9.9% 10.5% 11.2% 12.9% 13.8% 15.1%**

The Future of Renewables: A Look at 2030

In 2017, the National Energy Strategy (NES) set challenging targets for 2030. The Energy and Climate Plan (NECP), currently under elaboration, will update 2030 targets, and will probably be more ambitious.

RES share on renewable consumptions: past trend, mandatory 2020 targets and 2030 targets
EVOLUTION OF RES-E: STATISTICS

- **Capacity**: large stock of hydro, progressive increase of wind and bioenergy, and explosive PV in 2010-2013, now first RES
- **Energy**: hydro the largest RES, with large fluctuations; PV second source. In 2017 RES-E at 34% of electricity consumption
RES DISTRIBUTION: PV

- Total number: 774,014
- Total capacity: 19.7 GW

2017
RES DISTRIBUTION: WIND

Numero impianti in ITALIA: 2.734
Suddivisione per classe percentuale del numero di impianti
- Fino a 1,0
- 1,1 - 2,0
- 2,1 - 4,0
- 4,1 - 8,0
- 8,1 - 15,0
- 15,1 - 35,0

Potenza installata in ITALIA: 9.162 MW
Suddivisione per classe percentuale della potenza installata
- Fino a 0,1
- 0,2 - 1,0
- 1,1 - 4,0
- 4,1 - 8,0
- 8,1 - 20,0
- 20,1 - 28,0

2016
RES DISTRIBUTION: HYDROELECTRIC

Numero impianti in ITALIA: 3.693

Suddivisione per classe percentuale del numero di impianti
- fino a 0,5
- 0,6 - 1,0
- 1,1 - 2,0
- 2,1 - 5,0
- 5,1 - 15,0
- 10,1 - 22,0

Potenza installata in ITALIA: 18.543 MW

Suddivisione per classe percentuale della potenza installata
- fino a 1,0
- 1,1 - 2,0
- 2,1 - 5,0
- 5,1 - 10,0
- 10,1 - 20,0
- 20,1 - 30,0

2016
RES DISTRIBUTION: BIOENERGIES

Numero impianti in ITALIA: 2.647
Suddivisione per classe percentuale del numero impianti:
- fino a 1,0
- 1,1 – 3,0
- 3,1 – 5,0
- 5,1 – 10,0
- 10,1 – 15,0
- 15,1 – 28,0

Potenza installata in ITALIA: 4.057 MW
Suddivisione per classe percentuale della potenza installata:
- fino a 1,0
- 1,1 – 2,0
- 2,1 – 4,0
- 4,1 – 6,0
- 6,1 – 10,0
- 10,1 – 23,0

2016
RES DISTRIBUTION: GEOTHERMAL

Regione Toscana
N° impianti = 34
Potenza = 815 MW
Produzione = 6,289 GWh
Approximate periods of eligibility for support schemes in electricity sector

- **CIP 6/92** (Feed in tariff)
- **Certificati Verdi** (Green Certificates)
- **Conto Energia FTV** (Feed in premium)
- **Tariffe Onnicomprensive** (Feed in tariff)
- **Conto Energia CSP** (Feed in premium)
- **Decreto 6 luglio 2012** (Feed in premium/Feed in tariff)
- **Decreto 23 giugno 2016** (Feed in premium/Feed in tariff)
## Overview of support schemes implemented in electricity sector

<table>
<thead>
<tr>
<th>SUPPORT SCHEME</th>
<th>ACCESS PERIOD (since-to)</th>
<th>INCENTIVE DURATION (years)</th>
<th>SOURCE &amp; TECHNOLOGY</th>
<th>SUPPORTED ENERGY</th>
<th>CAPACITY</th>
<th>INCENTIVE TYPE</th>
<th>TARIFF VALUE DEFINITION</th>
<th>RENUMERATION OF INJECTED ENERGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD 23/6/2016 RES-E</td>
<td>2016-...</td>
<td>15-30</td>
<td>RES-E excluded PV</td>
<td>Injected</td>
<td>&lt;=500kW</td>
<td>FIT</td>
<td>Constant Tariff</td>
<td>Included in Tariff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PV include CSP</td>
<td></td>
<td>&gt;500kW</td>
<td>SFIP</td>
<td>Tariff – Energy Price</td>
<td>Power Market</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;=1MW</td>
<td>FIT</td>
<td>Constant Tariff</td>
<td>Included in Tariff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt;1MW</td>
<td>SFIP</td>
<td>Tariff – Energy Price</td>
<td>Power Market</td>
</tr>
<tr>
<td>MD 6/7/2012 FER-E</td>
<td>2013-2016</td>
<td>15-30</td>
<td>RES-E Excluded PV</td>
<td>Injected</td>
<td>&lt;=1MW</td>
<td>FIT</td>
<td>Constant Tariff</td>
<td>Included in Tariff</td>
</tr>
<tr>
<td>V Energy Account</td>
<td>2012-2013</td>
<td>20</td>
<td>PV</td>
<td>Produced</td>
<td>&lt;=1MW</td>
<td>FIT + AP</td>
<td>Constant Tariff</td>
<td>Included in Tariff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt;1MW</td>
<td>SFIP + AP</td>
<td>Tariff – Energy Price</td>
<td>Power Market</td>
</tr>
<tr>
<td>Energy Account CSP</td>
<td>2008-2016</td>
<td>25</td>
<td>CSP</td>
<td>Produced</td>
<td>Any</td>
<td>FIP</td>
<td>Constant Tariff</td>
<td>Power Market /SP&amp;RA/NM</td>
</tr>
<tr>
<td>Feed in Tariff</td>
<td>2008-2012</td>
<td>15</td>
<td>RES-E excluded PV</td>
<td>Injected</td>
<td>&lt;=1MW</td>
<td>FIT</td>
<td>Constant Tariff</td>
<td>Included in Tariff</td>
</tr>
<tr>
<td>I-IV Energy Account</td>
<td>2006-2012</td>
<td>20</td>
<td>PV</td>
<td>Produced</td>
<td>Any</td>
<td>FIP</td>
<td>Constant Tariff</td>
<td>Power Market /SP&amp;RA/NM</td>
</tr>
</tbody>
</table>

THE CASE OF SOLAR PV: “CONTO ENERGIA”

- 5 successive measures (I, II, III, IV, and V Conto Energia) with decreasing tariffs, ended in July 2013
- The decrease of tariff was not as fast as technology cost, thus resulting in generous incentives, which promoted an explosive growth of PV installations, with a high system cost, that reached the cap of 6.7 € bn
- After Conto Energia, reduced constant trend of 400 MW/y, due to small plants (45.000/y) with tax credit and net billing

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**Annual PV installations**

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity (MW)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>-</td>
<td>1.408</td>
</tr>
<tr>
<td>2006</td>
<td>10</td>
<td>87</td>
</tr>
<tr>
<td>2007</td>
<td>483</td>
<td>34.805</td>
</tr>
<tr>
<td>2008</td>
<td>781</td>
<td>41.788</td>
</tr>
<tr>
<td>2009</td>
<td>2.328</td>
<td>84.370</td>
</tr>
<tr>
<td>2010</td>
<td>9.539</td>
<td>174.395</td>
</tr>
<tr>
<td>2011</td>
<td>3.654</td>
<td>150.048</td>
</tr>
<tr>
<td>2012</td>
<td>1.400</td>
<td>110.949</td>
</tr>
</tbody>
</table>

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**Total Conto Energia plants**

- ~549.000 plants
- 17.5 GW
- 22 TWh
- 6.4 bn €

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**Trend after Conto Energia**

- ~45.000 plants
- 400 MW/year
- 97% < 20 kW (tax credit and Net billing)
### Incentive and energy

<table>
<thead>
<tr>
<th>Plant Capacity</th>
<th>Type of incentive</th>
<th>Energy belongs to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 MW</td>
<td><strong>Sliding Feed-in Premium</strong></td>
<td>Plant Owner</td>
</tr>
<tr>
<td></td>
<td>Feed-in value MINUS hourly zonal electricity market price</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Feed-in tariff</strong> technology and size banding incentive</td>
<td>GSE</td>
</tr>
</tbody>
</table>
Requirements: Building permission or, for hydro, geothermal, relevant public concession

Hierarchy criteria:
- For bioenergies: priority for specific bioenergies (by-products)
- Ranking in previous registries (MD July 6, 2012)
- Reduction of incentive tariff (90%)
- For geothermal: specific technologies (fluid re-injection)
- For hydroelectric: specific technologies (on artificial channels, waste waters, etc.)
- For CSP: Minor fraction of integration
- Date of project
- Minor capacity

Requirements:
- Building permission or, for hydro, geothermal and offshore wind, relevant public concession (no exceptions for plants up to 20 MW or off-shore wind)
- Capitalization as proof of financial and economic stability decreasing with the size of the projects (10% of the estimated investment costs up to 100 M€, 5% from 100 to 200 M€, 2% over 200 M€)
- Surety bond deposit by bank only (5% temporary, 10% definitive)

Other rules:
- Extended offer range (reductions up to 40%)
- Possibility to renounce granted capacity with limited deposit loss (30% by 3 months – 50% by 6 months)
FOCUS ON AUCTIONS: COMPETITIVENESS

Offers range and granted capacity in sessions

- **Initial time needed** for operators to get accustomed to the scheme (2012 session not completely assigned)
- **Increase in percentage reductions** offered over the four bidding sessions (40% in 2016 session)
- **Promotion of competitiveness** and reduction of system cost

Incentive defined by 2016 session

\[
I = T_b - P_z = 66 - (53) = 13 \, \text{€/MWh}
\]
In 2017 the cost for support and purchase of electricity was **14,2 billion euros**.

In 2017 the **burden on electricity bill of consumers was 12,5 billion euros**. The largest contribution is related to PV plants (6,5 bn €), followed by biomass, wind, hydroelectric, biogas.

### Electricity incentive by source & mechanism

<table>
<thead>
<tr>
<th>Source</th>
<th>RES burden by source</th>
</tr>
</thead>
<tbody>
<tr>
<td>District heating</td>
<td>0,0</td>
</tr>
<tr>
<td>Geothermal</td>
<td>0,1</td>
</tr>
<tr>
<td>Assimil. and other</td>
<td>0,5</td>
</tr>
<tr>
<td>Bioliquids</td>
<td>0,7</td>
</tr>
<tr>
<td>Biomass and...</td>
<td>1,0</td>
</tr>
<tr>
<td>Hydro</td>
<td>1,1</td>
</tr>
<tr>
<td>Wind</td>
<td>1,7</td>
</tr>
<tr>
<td>Biogas</td>
<td>1,9</td>
</tr>
<tr>
<td>Solar</td>
<td>7,1</td>
</tr>
</tbody>
</table>

### Electricity incentive net cost (RES burden in electricity bill)

- **Costs**: 14,2 bn €
- **Income Burden (energy sale)**: 12,5 bn €

### RES burden by source

- **6,5** bn € Solar
- **1,8** bn € Thermal
- **1,7** bn € Wind
- **1,5** bn € Biogas
- **1,0** bn € Hydro
A scenario of the RES burden evolution was drawn up, considering:

- **expiry** of incentive period for RES plants
- **gradual entry of new RES plants** with current incentive schemes without considering new policies & measures

**Scenario of RES burden evolution (billion euros) by supported mechanism**

**2030 analysis**

- By 2030 the incentives of **22 GW** plants are going to expire
- By 2030 the incentives burden could decrease of about **5,6 bn €** with respect to 2015
**EVOLUTION OF RES: IMPACTS ON HOUSEHOLDS EXPENDITURE**

RES burden is collected from electricity bills of consumers. In the case of **households**, total RES burden is about **113 €/year** (**85 €/year in the electricity sector**)

<table>
<thead>
<tr>
<th>Typical Consumption</th>
<th>Price</th>
<th>Expenditure</th>
<th>Sustainability quota</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.700 kWh</td>
<td>19.3 c€/kWh</td>
<td>521 €(*)</td>
<td>85 € (16%)</td>
</tr>
<tr>
<td>(4 people, lighting &amp; electrical appliances)</td>
<td>Households regulated tariff 3kW 2700kWh (AEEGSI 2017)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.400 Smc</td>
<td>73.2 c€/Smc</td>
<td>1.024 €</td>
<td>15 € (1%)</td>
</tr>
<tr>
<td>(heating, DHW, cooking, North Italy)</td>
<td>Households regulated tariff 1400 Smc (AEEGSI 2017)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800 l</td>
<td>1.43 €/l</td>
<td>1.144 €</td>
<td>13 € (1%)</td>
</tr>
<tr>
<td>(12,000 km)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,13 tep/anno(**)</td>
<td>2.689 €/anno</td>
<td></td>
<td>113 €/anno (4%)</td>
</tr>
</tbody>
</table>

(*) Without TV fee
(**) Primary energy consumption
EVOLUTION OF RES-E: IMPACTS ON JOBS

- RES impacts is calculated within the framework of a standard demand driven I-O model, suitably integrated and matched with the statistical and technical-economic data collected and analyzed by GSE.

- In 2017, wind and PV attracted higher investments (and “temporary” jobs, direct and indirect), hydro showed higher O&M costs (and “permanent” jobs, direct and indirect).

Investments and O&M costs in 2017* [mln €]

Temporary and permanent jobs in 2017*

Mixed pumping, waste, sewage and landfill plants not included.

(*) preliminary data
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EVOLUTION OF RES-E: THE ROAD TOWARDS 2030

- National Energy Strategy (NES 2017) defined a high target share of RES-E in 2030 (55%), with a +80% increase with respect to 2017 (from 103 TWh to 184 TWh). The higher contributions are expected from PV and wind: PV energy should triple (in the past 4 years about 400 MW/year installed; the rate should raise up to 3 GW/year); Wind energy should double.

- The National Energy and Climate Plan (NECP), under discussion, will probably be even more ambitious. NECP not only will define new targets, but also policies and measures to reach the targets.

The represented trajectories are only conjunctions between 2017 and 2030, real development will obviously be not linear.
The new M.D. draft aims at supporting, in the period 2019-2021, energy from new, refurbished and upgraded plants from “mature” RES: PV, onshore wind, hydro and sewage gas for a total capacity of about 8 GW (of which 7.4 GW new)

- 8 rounds of competitive AUCTIONS for groups of technologies (with reserves for each technology if some conditions occur) and REGISTRIES for smaller plants, with some competitive elements
- Plant owners offer a % reduction of the base tariff: between 2% and 70% for auctions, and up to 30% for registries (also other criteria)
- The support is mainly a Sliding FiP (“two-ways”: owner pays GSE back in case $P_{\text{electricity}} \geq \text{Incentive tariff}$) and a FiT (≤100kW); premium for PV plants removing asbestos in addition to the incentive

### Auctions (plants ≥ 1 MW)

<table>
<thead>
<tr>
<th>Group</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Wind, PV)</td>
<td>5.600</td>
</tr>
<tr>
<td>B (hydro, sewage gas)</td>
<td>110</td>
</tr>
<tr>
<td>C (refurbished wind, hydro, sewage gas)</td>
<td>500</td>
</tr>
</tbody>
</table>

### Registries: plants < 1 MW (PV >20kW)

<table>
<thead>
<tr>
<th>Group</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Wind, PV)</td>
<td>770</td>
</tr>
<tr>
<td>A-2 (PV substitution of asbestos)</td>
<td>800</td>
</tr>
<tr>
<td>B (hydro, sewage gas)</td>
<td>80</td>
</tr>
<tr>
<td>C (refurbished wind, hydro, sewage gas)</td>
<td>80</td>
</tr>
</tbody>
</table>

Specific financial requirements:
- capitalization as proof of financial and economic stability
- surety bond deposit (5% temporary, 10% definitive)

Main priority criteria:
- group A: plants installed on exhausted landfills or other specific areas;
- group A-2: plants on schools, hospitals, public buildings etc;
- combined with recharge columns for e-mobility
- offered reduction of the base tariff (max 30%)
FOCUS ON PAST AND FUTURE WIND AUCTIONS

- Increase in percentage reductions offered over the four past wind bidding sessions (all plants offered the maximum allowed reduction in 2016 session, 40% of the base tariff)

- Promotion of competitiveness and reduction of system cost

- The tariff resulting from the latest auction is comparable and can be even lower than the current and future energy price

- Uncertainty for the next auctions: the base tariffs established in the latest Decree draft is lower than the forward energy price

Onshore wind auctions base tariffs and offers range

<table>
<thead>
<tr>
<th>Year</th>
<th>Possible range</th>
<th>Base tariff</th>
<th>Min admitted reduction</th>
<th>Max admitted reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>89</td>
<td>127</td>
<td>96</td>
<td>124</td>
</tr>
<tr>
<td>2013</td>
<td>89</td>
<td>127</td>
<td>103</td>
<td>115</td>
</tr>
<tr>
<td>2014</td>
<td>89</td>
<td>127</td>
<td>89</td>
<td>93</td>
</tr>
<tr>
<td>2016</td>
<td>66</td>
<td>110</td>
<td>66</td>
<td>110</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Applied capacity (MW)</th>
<th>Admitted capacity (MW)</th>
<th>In operation capacity (MW)</th>
<th>% in operation/admitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>442</td>
<td>442</td>
<td>346</td>
<td>78%</td>
</tr>
<tr>
<td>2013</td>
<td>982</td>
<td>465</td>
<td>452</td>
<td>97%</td>
</tr>
<tr>
<td>2014</td>
<td>1.223</td>
<td>368</td>
<td>306</td>
<td>83%</td>
</tr>
<tr>
<td>2016</td>
<td>1.944</td>
<td>800</td>
<td>118</td>
<td>15%</td>
</tr>
</tbody>
</table>
ITALIAN EXPERIENCE: LESSON LEARNED

Tips for efficient RES development:

• **Stable framework**, guarantee continuity and “certainty” of RES policies, in a **long-term perspective**
  - Set **long term** RES targets
  - Promote a **progressive** development, consistent with the **national context**
  - Define **efficient authorization procedures**
  - Promote a consistent development of the electricity **grid**
  - Minimize country/investment **risk**, encouraging foreign investors

• **“Tune” incentives** finely
  - Incentive may **distort** the market: too generous tariffs can determine **speculative behaviors** rather than development
  - Set **fair tariffs**, if necessary and plan **progressive reduction**
  - Promote **competitive schemes**, like auctions

• **Monitor** results:
  - RES deployment and track towards targets
  - Provide **feedback to policy makers** and eventually adjust support schemes
THANK YOU

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