Speakers

PAOLO GALLO

ANTONIO PACCIORETTI
Scenario
Overall macro scenario

Industry sector trends

- Decarbonization
- Renewables
- Energy efficiency
- Sustainable Mobility
- Power to Gas and Green gas

Main challenges for DSO

- Supply flexibility and security
- Infrastructure development
- Renewable integration
- Digitization and artificial intelligence
- Competitive and agile
- Smarter tools

Gas infrastructure and digitization will play a key role in the energy transition
Facilitate the implementation of an effective and economically sustainable path towards decarbonization.

Paris agreement COP21

Agreed by all UNFCCC Parties in December 2015

(159 countries covering 90% of global GHG emissions)

Due to enter in force in 2020

1. COAL DECOMISSION & SUBSTITUTION WITH ADVANCED CCGT

2. POWER TO GAS

3. RENEWABLE GAS (BIOMETHANE)

80% cut in GHG by 2050, from 1990 levels
Opportunities for additional usage of gas infrastructures

- Existing assets combined with technological progress and innovation
- Opportunities to integrate renewables
- Economic and environmental advantages

Crucial role of gas infrastructure for decarbonization
**In Europe, renewable gas (hydrogen and biomethane), estimated to reach an annual production >120 billion cubic meters resulting in savings of ~ 140 €bn**

Italian biomethane production expected to reach up to 8bcm by 2030**

* Source: Gas4Climate Consortium, composed of Snam, Enagás, Fluxys, Gasunie, GRTgaz, Open Grid Europe and TIGF

** Source: CIB position paper
Biomethane in Italy

Biomethane expected to significantly increase in coming years

Current total capacity: 260 k scm/d
Current total production: 70 Mmc/y
Total new plants by 2022: 510 Mcm/y

60% connected to TRANSPORT GRID
300 Mcm/year

40% connected to DISTRIBUTION GRID
210 Mcm/year → 60 new Plants

New connections to the Italgas distribution grid
Estimated ~20 potential new plants connection*

Note: (1) MISE estimation based on accomplishment of obligations set by the new regulation
Source: Italgas elaboration

*Assuming ITG 1/3 market share
Biomethane: a fully renewable option for CNG/LNG transport

Low cost
Fast and widespread refuelling
Significant availability
- 1 million vehicles in Italy and 15 millions expected in Europe by 2030
Green alternative
Immediate decrease in emissions in the light transport sector

Cost-effectiveness
Mature Technology
Same performance as diesel and great autonomy (up to 1,600km). Electric vehicles are not available with these features

Green alternative
Immediate decrease in emissions in the heavy transport sector

Circular economy
Thanks to biomethane, CNG vehicles can contribute to reduce waste and eliminate emissions

(1) -95% of CO₂ using 100% of Bio-LNG
Sources: IVECO, Snam
Power to Gas contributes to energy system transition

- Captures and recycles CO$_2$ from industrial emissions
- Allows transforming electric power into storable hydrogen or SNG
- Improves energy system security and balancing

Utilisation of gas networks integrated with renewable energy and electricity networks

Digitization to drive DSO transformation

- Big Data
- IoT
- Cloud
- Analytics
- Automation
- Blockchain
- Augmented reality

Digitized gas grids

Reinforce customer engagement
Italian gas demand outlook

Natural gas: a key role in the long term energy scenario
Scenario

Gas distribution sector
Gas distribution in Europe

**Km of distribution grid**

(000\(^2\))

<table>
<thead>
<tr>
<th>Country</th>
<th>Km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>505</td>
</tr>
<tr>
<td>Italy</td>
<td>294</td>
</tr>
<tr>
<td>UK</td>
<td>286</td>
</tr>
<tr>
<td>France</td>
<td>232</td>
</tr>
<tr>
<td>Poland</td>
<td>190</td>
</tr>
<tr>
<td>Netherlands</td>
<td>134</td>
</tr>
<tr>
<td>Hungary</td>
<td>89</td>
</tr>
<tr>
<td>Spain</td>
<td>82</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>77</td>
</tr>
<tr>
<td><strong>EU28</strong></td>
<td>800</td>
</tr>
</tbody>
</table>

**End users and gas penetration**

<table>
<thead>
<tr>
<th>Country</th>
<th>Re-delivery points (Millions)</th>
<th>% of households</th>
<th>(Bcm a year(^3))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>23.2</td>
<td>92%</td>
<td>29</td>
</tr>
<tr>
<td>UK</td>
<td>23</td>
<td>82%</td>
<td>36</td>
</tr>
<tr>
<td>Germany</td>
<td>20.9</td>
<td>52%</td>
<td>37</td>
</tr>
<tr>
<td>France</td>
<td>11.3</td>
<td>38%</td>
<td>20</td>
</tr>
<tr>
<td>Spain</td>
<td>7.5</td>
<td>43%</td>
<td>7</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7.1</td>
<td>92%</td>
<td>12</td>
</tr>
<tr>
<td>Poland</td>
<td>6.7</td>
<td>50%</td>
<td>6</td>
</tr>
<tr>
<td>Hungary</td>
<td>3.5</td>
<td>87%</td>
<td>5</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>2.8</td>
<td>60%</td>
<td>3</td>
</tr>
<tr>
<td><strong>EU28</strong></td>
<td>120.3</td>
<td>57%</td>
<td>175</td>
</tr>
</tbody>
</table>

**Volume of gas distributed\(^1\)**

(Bcm a year\(^3\))

- Italy: 29
- UK: 36
- Germany: 37
- France: 20
- Spain: 7
- Netherlands: 12
- Poland: 6
- Hungary: 5
- Czech Republic: 3
- **EU28**: 175

Note: \(^1\) for comparability purposes among countries, the graph shows only volumes distributed to the Res&Comm segment. Source: Eurostat. \(^2\) data 2014. \(^3\) data 2015.

Italy is the country with the highest gas penetration in residential uses.
Italgas is leader in the fragmented Italian market.

Current market share in Italy

...by re-delivery points

- Italgas: 30.8%
- Z1 Rete Gas: 19.7%
- Unareti-A2A: 8.5%
- Inrete Distr. Energia-Hera: 8.3%
- Ireti-Iren: 4.2%
- Estra: 3.0%
- Ap Reti Gas-Ascopiave: 2.7%
- Erogasmet: 1.3%
- Other: 17.6%

...by gas volume distributed

- Italgas: 24.4%
- Z1 Rete Gas: 18.5%
- Inrete Distr. Energia-Hera: 9.3%
- Unareti-A2A: 8.7%
- Ireti-Iren: 4.5%
- Ap Reti Gas-Ascopiave: 3.2%
- Estra: 1.8%
- Erogasmet: 1.3%
- Other: 24.5%

...by network

- Italgas: 27.8%
- Z1 Rete Gas: 31.7%
- Inrete Distr. Energia-Hera: 10.5%
- Unareti-A2A: 5.9%
- Ireti-Iren: 3.7%
- Ap Reti Gas-Ascopiave: 3.3%
- Estra: 3.3%
- Erogasmet: 1.7%
- Other: 8.0%

Source: ARERA 2017 and MISE
...also in terms of RAB ...

**Key players’ market share**

<table>
<thead>
<tr>
<th>Company</th>
<th>% of RAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italgas</td>
<td>32.3%</td>
</tr>
<tr>
<td>2I Rete Gas</td>
<td>19.8%</td>
</tr>
<tr>
<td>Inrete Distr. Energia-Hera</td>
<td>7.8%</td>
</tr>
<tr>
<td>Unareti-A2A</td>
<td>6.5%</td>
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<tr>
<td>Ireti-Iren</td>
<td>5.0%</td>
</tr>
<tr>
<td>Ap Reti Gas-Ascoipvae</td>
<td>2.1%</td>
</tr>
<tr>
<td>Centria</td>
<td>1.6%</td>
</tr>
<tr>
<td>Erugasmet</td>
<td>1.1%</td>
</tr>
<tr>
<td>Concoop</td>
<td>1.0%</td>
</tr>
<tr>
<td>Acsm Agam</td>
<td>0.7%</td>
</tr>
<tr>
<td>Reti Più Swr-Gelsia</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

* 2018 data
Source: Italgas elaboration

**Total market RAB is ~€18bn***
Streamlining of Italian operators

Numbers of operators

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>730</td>
</tr>
<tr>
<td>2005</td>
<td>430</td>
</tr>
<tr>
<td>2017</td>
<td>211</td>
</tr>
</tbody>
</table>

With consolidation gathering pace

Scale is key in the ongoing consolidation process

Numbers of operators (2017)

- Total = 211
- Very large: 3%
- Large: 10%
- Medium: 10%
- Small: 50%
- Very small: 27%

Gas volumes (2017)

- Total = 31,568 mcm
- Very large: 63%
- Large: 19%
- Medium: 7%
- Small: 10%
- Very small: 1%

ATEMs’ tenders will transform the industry

Source: ARERA 2018
Tender Calendar

Total market awarded tenders (177 ATEMs)

- 2017-2020 Plan
- 2017-2023 Plan
- 2018-2024 Plan
- 2019-2025 Plan

Italgas estimate
Update on gas concession tenders

### Awarded tenders
- **Milano 1** 840 k RdP
- **Torino 2** 188 k RdP

### Tenders to be awarded
- **Belluno** 45 k RdP
- **Valle d’Aosta** 20 k RdP

### Tenders with expected offer presentation by 2019
- **Cremona 2/3** 115 k RdP
- **Udine 2** 91 k RdP
- **Torino 1 (IG 100%)** 566 k RdP
- **Genova 1 (IG 2.5%)** 336 k RdP

### Tenders with expected offer presentation by 2020
- **Firenze 1/2 (TE 98%)** 372 k RdP
- **Napoli 1 (IG 100%)** 390 k RdP
- **Vicenza 3** 103 k RdP
- **Forli Cesena (IG 1.5%)** 171 k RdP
- **La Spezia (IG 100%)** 111 k RdP
- **Perugia 2 (IG 27%)** 100 k RdP
- **Monza Brianza 1 (IG 34%)** 122 k RdP
- **Livorno (TE 15%)** 130 k RdP
- **Bologna 1 e 2 (IG 2%)** 482 k RdP
- **Lodi 1** 58 k RdP
- **Varese 2** 112 k RdP

> 2mn RdP
WACC reviewed at YE2018:
- Distribution 6.3%
- Metering 6.8%

1st Consultation Paper on V regulatory period

In the plan period we assume WACC to remain at current level
**1st Consultation Paper: next steps and Regulatory Body strategic positioning**

**May 2019**
- I Consultation Paper

**July 2019**
- II Consultation Paper

**October 2019**
- III Consultation Paper

**December 2019**
- Final delibera

**Consistent Regulatory framework**

- RAB METHODOLOGY CONFIRMED
- LENGTH OF 6 YEARS CONFIRMED
- FOSTER SECTOR CONSOLIDATION
- INCREASE SYSTEM EFFICIENCY

- Support sound business model
- Favour results visibility
- Create opportunities for efficient operators
## Proposal

### WACC
- Metering unlevered beta alignment to distribution (from 2020)
- Gearing level alignment to other gas/power regulated sectors (from 2022)

### OPEX
- 2020 unit allowed opex based on weighted avg of 2018 actual/allowed opex
- X-factor aimed at re-absorbing IV reg. period extra-efficiencies
- Closing the allowed opex gap due to company size

### CAPEX
- Incentives to network standard capex outperformance to be introduced as of 2021
- RAB subsidies release
- Recognition of not fully depreciated residual value of traditional meters due to past changes in regulatory lives

- Consolidation support through merger incentives for companies with up to 50K RDPs

## Comments

### WACC
- Smart meters higher technological risk profile
- Already announced; should also consider sector average and market conditions; consolidation push

### OPEX
- In line with past approach; Italgas’ higher efficiency compared to sector avg
- Favour consolidation process

### CAPEX
- Possibility to lever on Italgas’ scale economies
- Diluted over time and already envisaged
- Full reimbursement of meters’ residual value

- Foster sector consolidation
We are driven by:

1. COMMITMENT TO SUSTAINABILITY
   Involvement, accountability and communication

2. PUTTING PEOPLE FIRST
   Prepare our people to success in emerging industrial challenges

3. STRONG LOCAL PRESENCE
   Pursue an active role in the social innovation process of cities and communities

4. VALUE FOR MARKET AND CLIENTS
   Reshaping contents and communication with users

5. ENERGY EFFICIENCY AND ENVIRONMENT
   The key role of gas in decarbonization process of society

We want to:

1. Increase Italgas visibility on sustainability issues
2. Develop the culture of sustainability
3. Strengthen key process
4. Protect and enhance know-how
5. Strengthen corporate welfare
6. Promote women occupation in the company
7. Improve safety at work
8. Improve relations and involvement with territories
9. Invest in communities through measurable social innovation
10. Harmonize process with sales companies
11. Improve end customers’ relation
12. Improve efficiency and reduce our carbon footprint
13. Develop the gas advocacy
14. Enable circular economy process
Sustainability Plan leverages on 45 actions rooted on strategic pillars (1/2)

1. COMMITMENT TO SUSTAINABILITY
   Improve corporate **visibility** and **positioning** on sustainability for the stakeholders and financial community; development of a **sustainability culture** inside the corporation and strengthen corporate processes

- Questionnaires for sustainability indexes
- Joined United Nation **Global Compact** and other sustainability networks
- Implemented **induction meetings** with BoD

2. PUTTING PEOPLE FIRST
   Respect of human and **labour rights** and **gender equality**: value **know-how** through the **personal and professional** development; safeguard work **health and safety**

- 44% of new hires is a woman
- 67% of new hires is younger than 30 years old
- 2.9 Injuries frequency index (vs 4.0 in 2016)
- 19 hours of training per employee
### Sustainability Plan leverages on 45 actions rooted on strategic pillars (2/2)

<table>
<thead>
<tr>
<th>PILLAR</th>
<th>OBJECTIVE</th>
<th>KPI</th>
<th>ACTIONS</th>
<th>PROGRESS</th>
</tr>
</thead>
</table>
| **3. STRONG LOCAL PRESENCE**                | Improve relations and engagement with territories; invest in communities through measurable social innovation to support socio-economic development of the communities                                            | - 764 thousand euro in sponsorships (90%) and charitable donations (10%)  
- Energia mi piace: awareness campaign on energy  
- Donation of PC to the areas affected by the earthquake                                                                                           | 3        | 33%      |
| **4. VALUE FOR MARKET AND CLIENTS**         | Harmonize communication process with sales companies in order to improve end customers’ relationships                                                                                                    | 50 selling companies involved in a dedicated workshop (99% of total meters)                                                                                                                     | 4        | 92%      |
| **5. ENERGY EFFICIENCY AND ENVIRONMENT**    | Improve process efficiency and reduce corporate carbon footprint; develop the gas advocacy in the territories; enable circular economy process                                                               | -6% energy intensity and -4% carbon intensity (2018 vs. 2016)  
- 100% of corporate fleet switched to methane by 2019  
- 60% completion of smart metering programme (2018)                                                                                           | 9        | 67%      |
What we want to do:

- Completion of Sustainability plan 2018-2021
- Release of updated Sustainability Plan 2019-2022 (with 15+ new actions)
- Launch of first round of stakeholder engagement

Our objectives for next 3 years:

- Continuous assessment of materiality
- Implementation and update of Sustainability Plan 2019-2022
- Commitment to UN Global Compact
- Engagement of SRI Investors
- Continuous improvement in sustainability index and ratings

Environmental advantages of some actions over the plan period

- Full methane vehicle fleet
- Replacement grey cast iron pipelines with hemp & lead joints and mechanical joints
- Building renovation and mechanical upgrade
- Sardinia methanization
Strategic pillars

1. Network development
   Development, Sardinia, Maintenance and Upgrade

2. Digitization & Technical innovation
   Digitization & Technical innovation of assets, processes and workforce

3. Development opportunities
   M&A, energy efficiency, New services (Digital services and Engineering consultancy)

4. Operational efficiencies
   Continuous efficiency actions
   Digital Impact

5. Gas tenders
   Highly qualified to exploit tenders’ opportunities to increase market share

6. Solid and efficient financial structure
   Outstanding cost of debt and financial flexibility to support growth

7. Shareholder returns
   Robust and sustainable shareholders’ returns
Investment Plan without Tenders

~**4.5 Bn€ Capex**

2019-2025

**Network**: 2.08 Bn€

**Sardinia**: 0.50 Bn€

**Metering**: 0.42 Bn€

**Digitization**: 0.54 Bn€

**Centralized Assets**: 0.29 Bn€

~**3.8 B€ related to current base perimeter**

**Perimeter expansion**

- **Toscana Energia**: 0.35 Bn€
- **M&A**: 0.35 Bn€

Capex
Acquisition
Acquisition already completed in 2019
RAB evolution without tenders

Consolidated RAB\(^{(1)}\)
2018-2025

€bn

CAGR 2018-25
4.7%

~ 8.9

6.4

2018E**

Capex & Sardinia
Grants, disposal, etc
Allowed depreciations
Inflation
M&A
Toscana
2025E

~ 88 %
~ 12%

Distribution
Metering

A significant capex plan and selected M&A driving a robust RAB growth

** RAB referred to the year end T - revenues in the year T+1

(1) Continuity of regulatory treatment assumed for grants cumulated at 2018 year end; average deflator in the plan period assumed at 1.5%
1. Network capex

1. Replacement and upgrade

- Grey cast iron pipes with hemp & lead joints
- Grey cast iron pipelines with mechanical joints (by 2025)
- Unprotected steel pipes
- Replacement related to emergency interventions

2. Network extension & new connections

- Development of services to meet demand for new connections
- €40 mn for construction of new grids in South of Italy (>1,000Km)

3. LPG network conversion

- €60 mn for LPG conversion to natural gas

4. Technical innovation & Energy efficiency

- Turboexpander, cogen plants, microturbines
- Systems optimizing pre-heating consumption and remote control of gas odorization

5. Tenders already awarded

- Torino2 tender additional capex: ~€200mn (~€80/RdP/year) of which ~85% completed by 2025

Clever capex allocation leveraging on digitization outcome moving from traditional to predictive maintenance
## 1. Sardinia - A strategic role

### Today

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td># clients</td>
<td>~ 45,000</td>
</tr>
<tr>
<td>Network km</td>
<td>~ 1,000</td>
</tr>
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</table>

### Tomorrow

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td># clients</td>
<td>Potential market ~200,000</td>
</tr>
<tr>
<td>Network km</td>
<td>~ 2,000 (excl. interconnections) FULLY DIGITIZED</td>
</tr>
</tbody>
</table>

### Concessions in operation

- **Ichnusa Gas**: 10 concessions under construction
- **Ichnusa Gas**: 2 concessions in operation
- **Fontenergia**: 1 concession in operation
- **Isgas Energit Multiutilities**: 3 concession in operation
- **Medea (Sassari)**: 1 concession in operation

### Fuel

- Until natural gas is not available in Sardinia
- LNG/Natural Gas

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*As of May 1st 2019 merged into Medea SpA*
2. The digital transformation program

**Asset digitization**
- Industrial IoT
- Advanced Analytics / Big Data

**Process (staff&ops) digitization**
- Advanced Analytics / Machine Learning
- Bots / Digital Assistants
- Blockchain

**Workforce digitization**
- Mixed Reality
- Wearables
- Bots / Digital Assistants

**Transformation steps**
1. IT Architecture evolution to **Cloud-based model** and introduction of **Innovative technologies**
2. **Digital Factory**
3. **IoT Platform and Data Lake**
1. Smart meters (G4-G6)
- ARERA targets outperformance for mass market meters’ replacements
- Implementation of NB-IoT smart meters
  - Bit-Rate 364Mbps
  - Bit-Rate >1Gbps

2. Asset digitization
- Installation of:
  - ~5,300 digital GRF
  - ~6,500 sensors for detecting the gas pressure in the network terminal points
  - ~550 odorization monitoring points
  - ~10,000 cathodic protection monitoring points
- Upgrade of ~2,000 GRF with gas flow and pressure monitoring
- New Integrated Supervisory Center

**Metering**
- 0.42 Bn€

**Digitization**
- 0.54 Bn€
- 500 grids in 2019
2. Digitization of assets – Tech innovations underway

- Reduction of gas consumption for pre-heating
  - (p > 12 bar)
- Microturbines to generate electricity
  - (0.04 < p ≤ 0.5 bar)
- City Gates
- Big data
- Localization of underground assets
- Leak survey with CRDS technology
- Smart Meters
- End Point for pressure monitoring and odorization check
- Digital district governor
  - Flow Rate Monitoring
  - Alarm Management

DOMESTIC USERS, COMMERCIAL USERS, ARTISANS
SMALL DOMESTIC USERS
BIG INDUSTRIES
INDUSTRIES
GAS
District Governors
Intermediary Reduction Stations

Real Time Monitoring
2. Digitization of assets – Advantages

- Network balancing
- Consumption profiling
- Interventions prioritization
- Pressure level optimization
- Odorization level optimization
- Predictive maintenance
2. Process digitization

IT Architecture evolution to Cloud-based model

- Office 365
- Salesforce
- New Cartographic Platform

- New HR Platform
- New IoT Platform
- Big Data Platform
- Mixed Reality Platform

Introduction of Innovative Technologies

- Bots
- IoT
- New Leaks Detection Technology

- NBIoT
- Mixed Reality
- Virtual Assistants
- Big Data
- Machine Learning

- Fog Computing
- Blockchain

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IoT Platform

Azure IoT Hub

- Mixed Reality Prototype

GIS4Gas
Geo-referenced Grid Map

SpaceOne

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2017 Go2Cloud
2018
2019 IaaS, PaaS, SaaS
2020

1300+ EXTERNAL USERS
1400+ IPAD
500+ SMARTPHONES
60+ VIDEOCONFERENCES
100+ SITES

90+ APPLICATIONS
100+ TB DATA
200+ SWITCH
80 LAD SERVER
1000+ SERVER

1000+ PRINTERS
100+ PC

INFRASTRUCTURE

100+ SITES
1400+ IPAD
500+ SMARTPHONES
60+ VIDEOCONFERENCES
100+ SITES

DISTRIBUTED TECHNOLOGY

90+ APPLICATIONS
100+ TB DATA
200+ SWITCH
80 LAD SERVER
1000+ SERVER

APPLICATIONS

IaaS, PaaS, SaaS
2. The Digital Factory

Objectives

- Optimize and Digitize internal processes
- Introduce innovative technologies
- Change management
- Introduce flexibility, scalability and innovation
2. Digital Factory: First Outcomes

Room 1: Scheduling, dispatching and consumer experience

**INTERVENTIONS ON TIME**
- Automatically suggested ideal slots (Smart Booking)
- Integration of Priority Activities currently not in Agenda (e.g. Meters replacement)
- Automatic Activities proposal “saturating” technicians capacity

**SERVICE QUALITY**
- Activities flexible allocation and accounting process simplification
- Technical teams Geolocalization

**CONSUMER «CARE»**
- Automatic and ad hoc consumers notifications
- Visibility on Request Status and possibility to update remotely information about the intervention
- Consumers satisfaction monitoring

Room 2: Integrated Control Room

**‘Pronto Intervento’ Optimization**
- Non-relevant calls reduction (~62%)
- Emergency call management optimization (~5min) Call and dispatching partial automation
- Control Room performance management (compliant to SLA 92%) Visual Management tools

**Advanced Grid Monitoring**
- Data visualization Cabins and Grid status and activities
- New Use Cases and evolution from Pronto Intervento to Control Room
- Alerts and Notifications

**Effective Layout**
- Room Layout, dedicated areas, video-wall, operator desk

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**Room 1: Scheduling, dispatching and consumer experience**

**Consumer**

**Scheduler**

**Sales Companies /Contact Center**

**Technician**

---

**Room 2: Integrated Control Room**

**‘Pronto Intervento’ Optimization**

**Advanced Grid Monitoring**

---

**Effective Layout**

- Room Layout, dedicated areas, video-wall, operator desk

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**Room 1: Scheduling, dispatching and consumer experience**

**Consumer**

**Scheduler**

**Sales Companies /Contact Center**

**Technician**
2. Digital Factory: new rooms

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Room 3: Optimization of work sites monitoring and checks

**Targets**

- Improve documentation and technical check on worksites
- Reduce time and effort on site required to technical employees
- Improve data completeness on IT systems

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**Room 4: Digital solutions for knowledge transfer**

**Targets**

- Improve the sharing of specialist expertises
- Enable remote access to best practices
- Codify know-how and knowledge onsite

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3. Development Opportunities - M&A

As of 01/06/19

- EV ~ €335mn
- RAB ~ €315mn
- Network ~ 4,600 Km
- RdP 190K

Further acquisitions 2019-2021

- RAB + ~ €200m
- PdR +160k

Note: (*) Acquired from Amalfitana Gas (**) Acquired from CPL

M&A to fuel Italgas growth
3. Development Opportunities - Affiliates consolidation

### Toscana Energia key figures

#### Key financials

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<th></th>
<th>€m</th>
<th>2016A</th>
<th>2017A</th>
<th>2018A</th>
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</thead>
<tbody>
<tr>
<td>RAB</td>
<td>813</td>
<td>820</td>
<td>833</td>
<td></td>
</tr>
<tr>
<td>Capex</td>
<td>50</td>
<td>53</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>NFP</td>
<td>369</td>
<td>389</td>
<td>398</td>
<td></td>
</tr>
<tr>
<td><strong>Revenues</strong></td>
<td>134</td>
<td>138</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td>o/w Distribution</td>
<td>125</td>
<td>128</td>
<td>133</td>
<td></td>
</tr>
<tr>
<td>% Distribution growth</td>
<td>2.3%</td>
<td>2.7%</td>
<td>3.7%</td>
<td></td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>98</td>
<td>102</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>% Margin</td>
<td>73.1%</td>
<td>74.0%</td>
<td>72.7%</td>
<td></td>
</tr>
<tr>
<td>EBIT</td>
<td>63</td>
<td>60</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>% Margin</td>
<td>47.3%</td>
<td>43.2%</td>
<td>40.9%</td>
<td></td>
</tr>
<tr>
<td>Net Income</td>
<td>40</td>
<td>40</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>% Margin</td>
<td>30.2%</td>
<td>29.3%</td>
<td>29.1%</td>
<td></td>
</tr>
<tr>
<td>RdP ('000)</td>
<td>789</td>
<td>792</td>
<td>794</td>
<td></td>
</tr>
<tr>
<td>Concessions</td>
<td>104</td>
<td>103</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>457</td>
<td>458</td>
<td>454</td>
<td></td>
</tr>
<tr>
<td><strong>Network (km)</strong></td>
<td>7,788</td>
<td>7,866</td>
<td>7,900</td>
<td></td>
</tr>
<tr>
<td><strong>Gas Volume (mcm)</strong></td>
<td>1,087</td>
<td>1,140</td>
<td>1,134</td>
<td></td>
</tr>
</tbody>
</table>

#### Shareholding Structure

- **TOSCAN ENERGIA** consolidation perimeter
- **Italgas**
- Florence
- 76 other municipalities (Tuscany)
- PUBLI-SERVIZI
- Pisa

<table>
<thead>
<tr>
<th>%</th>
<th>Florence</th>
<th>76 other municipalities (Tuscany)</th>
<th>PUBLI-SERVIZI</th>
<th>Pisa</th>
</tr>
</thead>
<tbody>
<tr>
<td>48.6%</td>
<td>20.6%</td>
<td>16.2%</td>
<td>10.4%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

#### Transaction rational

- The expected transaction would allow Italgas to fully consolidate RAB (€ 833 mn) & EBITDA (€ 104 mn)

- Consolidation outcomes:
  - Operational & financial efficiencies
  - Full value from tenders in Toscana Region

---

Note:
(1) Consolidated financials.
(2) Each with stake <2%.
3. Development opportunities – Energy efficiency

**Energy Efficiency**
- Improve ESCO positioning
- Focus on gas energy efficiency segment
- Focus EPC projects

**The ESCO for the Group**
- Group Energy Masterplan
- Italgas Digital Factory
- TEE generation
- ATEM tenders
- Toscana Energia Green

**Group platform for innovation**
Development of a platform to manage Group innovative initiatives

**2019-2025 Growth in Italgas**

**Digital Energy**
- Energy efficiency vertical integration
- Machine learning algorithm for energy efficiency applications
- Digital diversification

**External Growth acceleration**
- Network partnerships (managers & agents, existing networks, partnerships with other networks)
- Acquisitions of:
  - Innovative Start-ups (innovative products and solutions)
  - Other companies & TEE portfolios

**Expected business growth**
- Revenues
- EBITDA

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenues (€mn)</th>
<th>EBITDA (€mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>4.8</td>
<td></td>
</tr>
</tbody>
</table>
Significant improvements in gas leak detection

- Sensitivity: from parts per million (mg/kg) to parts per billion (µg/kg)
- 5x improvement in leaks detected on underground pipes
- Numerous airborne micro-leaks, with traditional technology not detectable
3. Picarro commercial opportunities

Now available on boat

In Italy
Leak inspection program for Italian DSOs

Abroad
Services for European DSOs (i.e. consultancies, leak inspection)

~ € 10mn additional revenues in the plan period

Value creation through innovative technology

Full Services or consultancy services
GOAL AND HR REQUIREMENTS

Definition of HR requirements of the Operation Area

Criteria
Internally manage the Emergency Response Unit activities

HR PLANNING

With respect to the present situation:

- HR exits, taking into account estimated retirements
- New entries in order to cover organizational requirements and competence skills

Over the period 2019-2025, the baseline perimeter shows:
- A net exit of 300 HC
- Entry / exit substitution rate of ~80%

Quota 100
Improved scenario

Headcounts per age

20 30 40 50 60

Cumulated exit Cumulated entry Net flow cumulated

ENTRY EXIT

2019 2020 2021 2022 2023 2024 2025

~1,200 ~1,500
## 4. Operational efficiencies - Digital factory

### Digital Room Mission

<table>
<thead>
<tr>
<th>MVP</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>New booking, scheduling and dispatching algorithms</td>
<td>Customers <strong>satisfaction</strong></td>
</tr>
<tr>
<td><strong>Real-time push notifications</strong> to customers</td>
<td><strong>+5% efficiency</strong> of resources</td>
</tr>
<tr>
<td>New <strong>Call management processes</strong> and tools</td>
<td><strong>Reduced cost</strong> of penalties (-30%)</td>
</tr>
<tr>
<td>New <strong>grid analyses</strong> and <strong>performance monitoring</strong></td>
<td><strong>Faster response</strong> to emergency calls (-20% wait time)</td>
</tr>
<tr>
<td>Innovative <strong>Room layout</strong></td>
<td><strong>Increased visibility on grid status</strong></td>
</tr>
<tr>
<td>Digital tools for <strong>remote worksite supervision</strong></td>
<td><strong>Reduced worksite control time</strong></td>
</tr>
<tr>
<td>Automated <strong>progress tracking</strong> elements</td>
<td><strong>Reduced monitoring/ check external costs</strong></td>
</tr>
<tr>
<td><strong>Asset data</strong> codification</td>
<td><strong>More accurate asset data codification</strong></td>
</tr>
<tr>
<td>Introduction of <strong>remote support</strong></td>
<td>Better <strong>access to expertise</strong> for workers and technicians</td>
</tr>
<tr>
<td><strong>Knowledge</strong> capture and codification</td>
<td><strong>Improved efficiency of field interventions</strong></td>
</tr>
<tr>
<td>Availability of augmented <strong>contents</strong></td>
<td><strong>Reduced training costs</strong></td>
</tr>
</tbody>
</table>

#### 1. Evolve scheduling, dispatching and customer engagement

#### 2. Shape the Emergency and Monitoring Center

#### 3. Optimize construction sites supervision and progress tracking

#### 4. Knowledge transfer digital solutions
4. Benefits from digitization

- ~ 40 mn€ capex
- ~ 90 mn€ opex
- ~ 30 mn€ additional revenues

~ €160 mn potential savings over the plan period

**ICT:** benefits from cloud adoption and reduction of software development request

**Network:** reduction of maintenance capex thanks to intervention optimization and workforce re-organization

**ICT:** cloud adoption also allow opex reduction

**Operation:** saving from activities to end user, grid maintenance and penalties reduction

Increase of **ARERA incentives** thanks to new technologies for leak detection activity

**Improvement in service quality and customer satisfaction**
4. Distribution activities: Opex

2016-2018
A remarkable reshape of the base line

€mn

2016  416
2017  348  ~ -16%
2018  339  ~ -3%
2021
2025

Continuous commitment on operational efficiency over the plan period

* Without change in business perimeter
5. Criteria to select target ATEMs

ATEM profitability

- **Market**
  - Italgas market share
    - Italgas PdR over ATEM PdR
  - Operator fragmentation
    - Number of DSOs operating in the ATEM

- **Operators**
  - Operator type
    - Main competitors’ market share (national and regional level) and type

- **DSO**

- **ATEMs**
  - Geographical contiguity
    - Italgas presence in neighboring ATEMs
5. Tenders clusters

~45 ATEM
(86% Italgas market share on average)

~55 ATEM
(27% Italgas market share on average)

Very attractive tenders

Medium attractive tenders

Low to zero attractive tenders

Target return

Illustrative

Return

177 ATEMs

6.8 5.8 6.2 5.5
RDP (#Mn) RAB (#bn)

5.6 1.5 4.2 1.3
RDP (#Mn) RAB (#bn)

9.5 0.3 7.7 0.3
RDP (#Mn) RAB (#bn)

* Including Toscana Energia
5. Tenders: an additional growth opportunity

**Redelivery points**

- **CAGR 2018-25**: 5.4%
- **ORGANIC AND M&A**: 6.7 m
- **TENDERS**: ~8 m\(^1\)
- **TENDERS**: ~9.7 m\(^1\)
- **2018**: ~31%
- **2025**: ~37%
- **2025**: ~45%

**Tenders capital deployment opportunities**

- **Net capital to be deployed in tenders** (2)
  - ~1.3 \(\text{\texteuro\text{bn}}\)
- **Capex within 2025 induced by tenders**
  - ~0.6 \(\text{\texteuro\text{bn}}\)

(1) Including Toscana Energia
(2) Net of redemption value of asset transferred to other operators in the tender process and assuming RV=RAB
5. RAB evolution with tenders

Consolidated RAB(1)
2018-2025

€bn

CAGR 2018-25
+7.1%

6.4

~ 88% Distribution
~ 12% Metering

2018E**
Capex & Sardinia
Grants, disposal, etc. allowed depreciations
Inflation
M&A
Toscana
2025E
Tenders
2025E

~ 8.9
>10

** RAB referred to the year end T - revenues in the year T+1

(1) Continuity of regulatory treatment assumed for grants cumulated at 2018 year end; average deflator in the plan period assumed at 1.5%
6. Financial strategy to support a superior equity story...

A solid and efficient financial structure

- Generate strong and resilient cash flow to cover organic capex and dividends
- Limited refinancing risk
- Limited exposure to interest rates volatility
- Maintain a safe liquidity profile in the medium term
- Current outstanding cost of debt maintained over the plan period

Preserve a solid investment grade rating

Fitch BBB+ & Moodys’ Baa2
6. Strong and resilient cash flow ... growth and flexibility for tenders and shareholders

**Cumulative amounts for the full business plan***

- **OCF**: 1.3 €bn (~11% of RAB)
- **Capex and M&A**: >1.1 €bn
- **Dividend paid**: >0.3 €bn in 2018-2017
- **NFP under control**: +5%
- **Leverage**: from 61% to 59.6% ↓

**2017-2018 track record**

- **DPS FY 2018**: +12.5 vs 2017

---

* Measurement of the chart for Illustrative purpose
6. Limited refinancing risk and exposure to interest rates

Superior combination of solidity and efficiency

4.8 € bn
Total Committed Credit Facilities and Bonds

3.7 € bn
RCF 1.1€ bn

No refinancing risks until 2022

Fixed Floating ratio

1.2%
Expected 2019 cost of debt

Fixed 13%
Floating 87%
6. Debt structure evolution

- Invest in tenor: leveraging on debt capital market (5-10y) and institutional lenders (longer maturity)
- Maintain current fixed rate portion as long as the current low interest rate scenario remains
- Landing point: 2/3 fixed, 1/3 floating
- Adequate committed m/l term Credit Facilities balancing cost and profile over the plan period
- Leverage system liquidity to optimize cash management

Current cost of debt over the plan period
6. Key credit metrics

Sound credit profile well positioned in a solid investment grade area

- Well balanced capital deployment profile to optimize credit metrics:
  - M&A and Sardinia in the first part of the plan period
  - Tenders awarding expected towards the second part of the plan
### 2019 Guidance and expected plan evolution

**OUTLOOK with tenders**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenues</th>
<th>Ebitda</th>
<th>EBIT</th>
<th>Capex</th>
<th>Consolidated RAB*</th>
<th>Leverage**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>~1.2 €bn</td>
<td>840-860 €mn</td>
<td>460-480 €mn</td>
<td>~ 700 €mn</td>
<td>~6.7 €bn</td>
<td>~ 59 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenues</th>
<th>Ebitda margin</th>
<th>Ebit/RAB</th>
<th>Consolidated RAB*</th>
<th>Leverage</th>
<th>Annual average OCF/ RAB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>~1.5 €bn</td>
<td>~73 %</td>
<td>~8 %</td>
<td>~8.5 €bn</td>
<td>&lt;60 %</td>
<td>~ 10 %</td>
</tr>
<tr>
<td>2025</td>
<td>~1.8 €bn</td>
<td>~75 %</td>
<td>8 - 8.5 %</td>
<td>&gt;10 €bn</td>
<td>&lt;60 %</td>
<td>~ 10 %</td>
</tr>
</tbody>
</table>

* RAB referred to the year end T - revenues in the year T+1
** Calculated as ND/RAB including affiliates at equity RAB

(1) Includes Toscana Energia
Shareholder Remuneration & Closing Remarks
Dividend policy confirmed

Highest between:
- DPS 2017 +4% p.a.
- DPS equal to 60% of consolidated net income

<table>
<thead>
<tr>
<th>Year</th>
<th>DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2017</td>
<td>0.208</td>
</tr>
<tr>
<td>FY2018</td>
<td>0.234</td>
</tr>
</tbody>
</table>

DPS 2018
€0.234
(+12.5 vs 2017)

60% pay out triggered
Thank you
Annexes
The leading Italian natural gas distributor

<table>
<thead>
<tr>
<th></th>
<th>Base Line</th>
<th>Of which affiliates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network length</td>
<td>69,782 km</td>
<td>8,421 km</td>
</tr>
<tr>
<td>Municipalities</td>
<td>1,808</td>
<td>108</td>
</tr>
<tr>
<td>Redelivery Points</td>
<td>7.56 mn</td>
<td>0.85 mn</td>
</tr>
<tr>
<td>Market Share&lt;sup&gt;1&lt;/sup&gt;</td>
<td>34.7%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Gas distributed&lt;sup&gt;2&lt;/sup&gt;</td>
<td>9.1 Bcm</td>
<td>1.23 Bcm</td>
</tr>
<tr>
<td>Employees</td>
<td>4,127</td>
<td>460</td>
</tr>
</tbody>
</table>

Note:  
<sup>1</sup> Calculated by redelivery points  
<sup>2</sup> Annual Volume  
Source: Data updated December 2018
### Operating costs: allowed opex

#### MUNICIPALITIES REFERENCE OPEX 2019

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Client density</th>
<th>Italgas Reti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large &gt; 300,000 PdR</td>
<td>High</td>
<td>32.79</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>36.49</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>38.78</td>
</tr>
<tr>
<td>Medium 50,000-300,000 PdR</td>
<td>High</td>
<td>35.77</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>39.80</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>42.30</td>
</tr>
<tr>
<td>Low ≤ 50,000 PdR</td>
<td>High</td>
<td>40.96</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>45.60</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48.45</td>
</tr>
</tbody>
</table>

+ 7.57

### ATEM REFERENCE OPEX

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Client density</th>
<th>ATEM Reference OPEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATEM size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 300,000 PdR</td>
<td>High</td>
<td>32.79</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>36.49</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>38.78</td>
</tr>
<tr>
<td>≤ 300,000 PdR</td>
<td>High</td>
<td>34.24</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>38.15</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>40.54</td>
</tr>
</tbody>
</table>

+ ATEM Torino 2

### Metering

<table>
<thead>
<tr>
<th>t(ins)(^{opex})</th>
<th>t(rac)(^{opex})</th>
<th>t(cot)(^{opex})</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.29</td>
<td>3.25</td>
<td>2.03</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>t(ins)(^{opex})</th>
<th>t(rac)(^{opex})</th>
<th>t(cot)(^{opex})</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.29</td>
<td>3.25</td>
<td>2.03</td>
</tr>
</tbody>
</table>
## Legal tender criteria for awarding concessions

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>MAX. POINTS AWARDED</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security &amp; Quality</td>
<td>27</td>
<td>- Network inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Promptness of intervention</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Level of gas odourisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Quality parameters individually defined by the contracting authority</td>
</tr>
<tr>
<td>Development of the distribution system</td>
<td>45</td>
<td>- Network management efficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Adequacy of assets and equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Extension and development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Technological innovation</td>
</tr>
<tr>
<td>Economic criteria</td>
<td>28</td>
<td>- Concession fee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Discounts on tariff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Discount on costs of services and on network extension</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Energy efficiency investments</td>
</tr>
</tbody>
</table>

**Awarding system focused on technical criteria favor experienced players**
Italgas’s Manager, Giovanni Mercante, in his position as manager responsible for the preparation of financial reports, certifies pursuant to paragraph 2, article 154-bis of the Legislative Decree n. 58/1998, that data and information disclosures herewith set forth correspond to the company’s evidence and accounting books and entries.

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Italgas
Strategic Plan
2019 - 2025

12th June 2019, London